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June
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# Contents

JUNE, 1960 *Volume 7, Number 6*

## *editorial*



## *original articles*

# *Contents*

JUNE. 1960 *Volume 7, Number 6*



## *clinical note*

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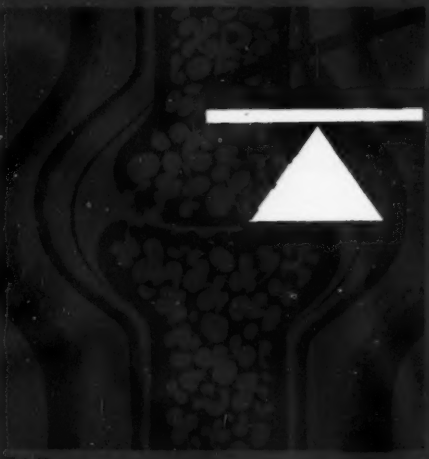

Geigy

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JUNE, 1960 *Volume 7, Number 6*

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JUNE, 1960 *Volume 7, Number 6*



## *briefs: medicine*



## *briefs: surgery*

Photos Courtesy F. C. Gindhart, M.D.

## *For more successful pregnancies in habitual aborters*

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# Contents

JUNE, 1960 *Volume 7, Number 6*

## *briefs: therapy*



## *briefs: diagnosis*

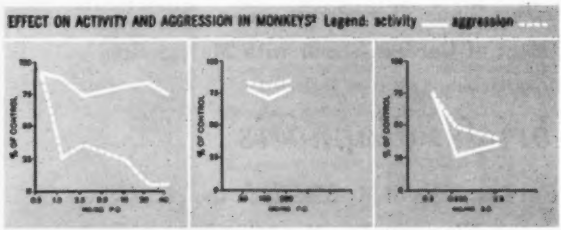


## *features*

**Macaque monkey** is characteristically vicious prior to Librium therapy.

**Calm but alert,** Librium-treated monkey d
ing contrast to "doped-up" appearance
with reserpine and phenothiazine deriva

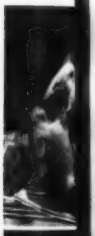
# taming effect of Librium on rats, monkeys and




**Librium**[7-14]
**Aggression dramatically reduced; level of activity normal**

**Meprobamate**
**No decrease in aggression; slight reduction of activity**

**Chlorpromazine**
**Aggression reduced; precipitous decrease in activity**



**Rage reaction** is elicited by lifting tail of rat made vicious by destruction of septal area in brain. **Librium-treated** septal rat remains calm but alert.

**Technician holds septal rat** in bare hand—an act which would cost him a finger' without the aid of Librium.

**Mice fight**
furiously und
of mild elec
administered
bottom of ca
treated ani
show hostili

# *Clinical Medicine*

JAMES M. NORTHINGTON, M.D., *Editor-in-Chief*

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# resent Status of Anabolic Therapy

JAMES M. NORTHINGTON, M.D., *Editor-in-Chief*

*Although testosterone has long en recognized as an effective an- olic agent, its clinical use has been nited by its attendant androgenic operties. Recently, a number of nthetic steroids have become avail- le which are more potent than stosterone anabolically and which ert little androgenicity.*◀

Protein is required for growth, aling, immunity, blood forma- on, and other vital processes. many disease and debility ates, therefore, it is rational erapy to encourage as rapid increase in protein biosyn- esis as possible. Anabolic ster- ds are utilized to increase the fectiveness of dietary protein, function which can be demon- rated in metabolic balance udies by the amount of nitro- en retained. Not only is less trogen excreted during ana- olic therapy, but potassium and hosphorus are also retained, in e proportion normally present new tissue. Weight gains may herefore reasonably be regarded s the result of new tissue rowth, rather than the result of fluid retention.

In a state of negative nitrogen balance, or excessive protein loss, new tissue growth cannot take place fast enough to counteract disease and repair wounds. Anabolic steroids, by bringing the patient into positive nitrogen balance and by making the most efficient use of the patient's dietary protein, effectively offset the wasting caused by disease or trauma.

Clinical use of testosterone as an anabolic agent has been hampered, not only by its virilizing effects, but also by its short duration of action. Esterification, which prolongs the action of parenterally administered steroids, has produced testosterone propionate, a parenteral compound employed for sustained anabolic-androgenic therapy. Testosterone itself is virtually inactive when given by mouth, but the 17-methyl compound, methyltestosterone, has proved effective when administered orally.

The search for orally effective

anabolic preparations with less androgenicity than methyltestosterone resulted in the discovery of two compounds which have been available for several years, methylandrostenediol and methylandrostanolone. When given in relatively small doses, side effects seldom occurred, but employment of high doses required in such conditions as mammary carcinoma often produced masculinization.

The most recently introduced anabolic compounds are derivatives of 19-nortestosterone. Various alterations of the molecule have produced new compounds with anabolic effects comparable to those of testosterone and have significantly reduced androgenic activity. Norethandrolone may be administered parenterally or orally. The 10-mg. tablet is the most widely employed dose-form, and the average dosage by mouth is 30 to 50 mg. per day.

Nandrolone phenpropionate, a recently introduced synthetic androgen,[1] appears to exert a longer action. Administered intramuscularly, 25 mg. (1 cc.) once a week is an effective adult dose. Nandrolone phenpropionate is reported to be non-virilizing, and without progestational side effects. Since its introduction in Europe over three years ago, neither renal nor hepatic toxicity has been reported.

Methandrostenolone and oxymethandrolone, the two most recently introduced compounds, are chemically similar to methyltestosterone and are effective orally.

The clinical application of these tissue-building, non-virilizing compounds is extremely broad. Whenever excessive protein breakdown occurs, anabolic therapy acts to inhibit further nitrogen loss by establishing and maintaining positive nitrogen balance.

This conservative, creative metabolic process is manifested subjectively as well as in measurable, clinical benefits. Increased appetite, a renewed sense of well-being, and palliation of pain are often immediately evident, and are usually followed by steady increase in body weight.

The general practitioner sees many patients who are fatigued, underweight, cachectic. Such patients are generally considered excellent candidates for anabolic therapy. Increased utilization of protein stimulates appetite, renews strength and vitality, and adds weight in the form of solid muscular tissue. These new protein anabolizers are worthy of prolonged trial in "stimulation of growth in the dwarfed of both sexes."[2]

By accelerating protein s

1. Editorial, *Lancet*, 2:890,1958.

2. Editorial, *Brit. M.J.*, 2:785,1958.

esis, anabolic steroids encour- e recalcification of the skeletal otein matrix and are thus val- ble agents for use in osteo- rosis and other conditions as- ciated with demineralization, ch as that produced by pro- nged administration of corti- steroids.[2]

Testosterone has been em- oyed for many years in "estro- n-dependent" mammary can- rs, despite its masculinizing ef- cts. There is now a consider- le amount of evidence to sug- st the relative ineffectiveness testosterone in mammary car- noma.[3] For this indication, the n-androgenic anabolic steroids ve demonstrated important lliative value, often retarding mor growth and skeletal me- ases.[4] Even in terminal situations, anabolic therapy with the newer compounds usually makes the patient feel better and may enable the physician to reduce the narcotic ration.

Following major surgery, severe trauma, or extensive burns, and in acute or chronic illness, when marked protein breakdown occurs, these important new anabolic compounds encourage wound healing and aid convalescence. It seems that their only specific contraindication is prostatic carcinoma. It is also recommended that they be used with special caution in the presence of known hepatic damage or renal obstruction. To obtain maximum therapeutic benefits, adequate intake of protein must be provided, and an exercise regimen within the limits of the patient's condition should be encouraged.◀

Editorial, *J.A.M.A.*, 172:1288,1960.
Bishop, P. M. F., *Brit. M.J.*, 1:184,1960.

---

**testinal Amebiasis: eatment with Glaucarubin**

Ten patients with amebiasis re treated with glaucarubin, a coside extracted from Simaba glauca, in an oral daily dose of 175 to 200 mg. for 5 to 7 ys. The results were excellent, disappearance of rectal ulration in acute attacks of dysntery. Good results were obned in the diarrheic form and the functional disturbances of chronic amebic colitis. One patient had a few brief sensations of vertigo. The general condition of several patients improved rapidly. Appetite improved and strength was regained. The high percentage of cures without recurrence and excellent tolerance for the drug has been noted by other investigators.

Pedoya, C., et al., *Presse méd.*, 67:1481-1483, 1959.

# he Neck-Shoulder-Arm Syndrome

PAUL R. MILLIGAN, M.D., *Salt Lake City, Utah*

*his pain syndrome may occur*
*er with or without antecedent ac-*
*nt and is largely psychogenic,*
*ough postural defects can usually*
*demonstrated. Treatment includes*
*ssurance, application of heat, pos-*
*e-correcting devices, and massage.*
*erent emotional instability is of-*
*a barrier to cure.*◀

he frequent occurrence in of-
e practice of neck-shoulder-
n pain with headache and in-
scapular pain has motivated a
ailed survey of these patients.
o, the observed disastrous re-
ts of cervical disk surgery in
tain of these cases has stim-
ted the rapid acquisition of
owledge.

### Terminology

This condition has been de-
ibed as an *acro-neurosis*, with
e factors in its etiology enum-
ated as:

1. An extremely mobile nerv-
s system.
2. Exhausting disease or over-
rk.
3. A mental strain.[1]

1. Dana, C. L., *M. Record, N.Y.*, 28:57,1885.

The same condition has been described under the term *acro-paresthesia*.[2] The condition has been spoken of as *brachalgia statica paresthetica*.[3] The European literature has references to *cervico-brachial neuralgia* and *cervicobrachalgia*[4] each being a pain syndrome with little or nothing in the way of objective physical findings. The term *whip-lash* was apparently coined to denote an injury frequently sustained in head-on automobile collisions.[5] Since then, the dramatic aspects of the term have been used to impress juries until the term has acquired an aura of frank exaggeration and is falling into disrepute in medical circles.

In recent years the terminology has tended to emphasize postural factors: *Scapulo-costal syndrome (fatigue-postural paradox)*,[6] *postural myoneuralgia*,[7]

2. Putnam, J. J., *J. Nerv. & Ment. Dis.*, 44: 193,1916.
3. Wartenberg, R., *J. Nerv. & Ment. Dis.*, 99: 877,1944.
4. Tapiovaara, J., & Heinivaara, O., *Ann. Chir. et gynaec. Fenniae*, 43:436-444,1954.
5. Davis, A. G., *J.A.M.A.*, 127:149,1945.
6. Michele, A. A., et al., *New York J. Med.*, 50:1353,1950.

and *cranocervical myodysneuria*.[8] The term *neck-shoulder-arm syndrome* was used to describe the colloquial "pain in the neck" and emphasized the autonomic components.[9] It has seemed to me that, in view of the multicentric etiology, and the poorly understood mechanisms, the continued use of the "neck-shoulder-arm syndrome" non-committal term is advisable.

### Etiology

The neck-shoulder-arm syndrome occurs with and without antecedent injury. When a history of an injury is obtained, it is usually a trivial one and of no specific type. Yet so constant a set of symptoms must have a more or less common etiology. The critical mind is forced to reject the varied trivial trauma as prime factors in causation and look further for a more common denominator.

Let the patient exhaust his tedious account of the mysterious and elusive symptoms; let him vent his wrath against the "other driver" whose "carelessness" is the cause of all his woe. If the patient has been able to freely unload all of these frightening symptoms into a sympathetic ear and he still feels that he can go farther, he will. And as he do the common denominator of t neck - shoulder - arm syndro comes into view: the eleme of emotional turmoil such anxiety, fear, hate, desire for venge, and so forth.

Several times it has appear that the exception had co along to prove the rule. Once neck-shoulder-arm syndrome p tient declared repeatedly th she harbored no emotional tu moil and that everything w happy and serene. Not five mi utes later, while still recounti her symptoms, she broke do and sobbed. Further questioni revealed that she frequently h crying spells but she maintain that she didn't know why. A other patient stood her grou throughout the interview a examination to the effect th she had no emotional turm The notice of her divorce grounds of mental cruelty was the evening newspaper!

While it is felt that emotio turmoil is the *sine qua non* of t neck-shoulder-arm syndrome. nidus of organic pathology c usually be demonstrated. O attention has been called to t normal descent of the should girdle in relation to the spine life progresses.[10] The brachi plexus must adjust by elonga ing. Add to this the droopi shoulders and beginning dor

7. Johnson, D. A., *M. Ann. District of Columbia*, 27:6,1958.
8. Gutstein, R. R., *Am. Practitioner*, 7:1809, 1956.
9. Comvere, E. L., *New Orleans M. & S.J.*, 104:473,1952.
10. Todd, T., *Ann. Surg.*, 75:105,1922.

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Mead Johnson
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round back of middle age and the common discomforts of this period around the base of the neck and between the shoulder blades become readily understandable. Many barbers, recognizing the prevalence of these symptoms in their middle-aged customers, will pass a hand vibrator over the area at the conclusion of a haircut. In the presence of emotional turmoil, these commonplace discomforts are transformed into the neck-shoulder-arm syndrome with its widely radiating, sickening, demoralizing pain. If the climate is right otherwise, any sort of minor trauma, even a simple sprain, that focuses attention on the neck, will serve as a catalyst for the development of the syndrome. Some of these unfortunate patients have been subjected to radiologic examinations almost to the point of x-ray burns in futile attempts to visualize organic pathology commensurate with the symptoms, when the slouching posture is readily visible on inspection. The fact that this pathology does not lend itself to the recovery of large sums of money in damage suits does not detract from its scientific validity.

A high dorsal scoliosis is found in patients with neck-shoulder-arm pain too often to be coincidental. It appears to be part of the general picture of defecti posture. Whether it plays a mo definitive etiologic role has n been determined.

**Symptoms**

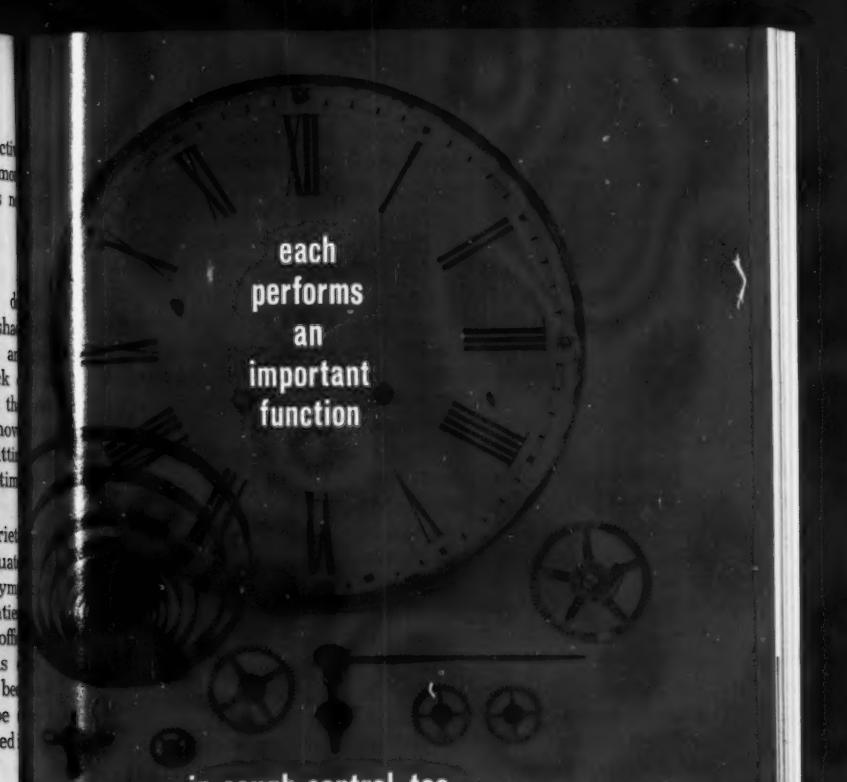
1. A burning, sickening, d moralizing neck pain oversha ows all other symptoms a signs. It starts in the back the neck. The patient says th the pain is aggravated by mov ment of the neck or by sittin still for a long period of tim as in a theater.

2. Headache, occipital, parie and frontal, which fluctuat with the neck pain. This sym tom sometimes lands the patie in the otolaryngologist's offi with a tentative diagnosis chronic sinusitis. It has be called the commonest type chronic headache encountered EENT practice.[11]

3. Ocular symptoms may cau the patient to consult an ophth mologist. The patient may co plain of (a) pain and fatigue the eyes, (b) spots before t eyes which do not normally e ter consciousness, (c) intole ance of bright light, (d) itchi of the eyelids, (e) twitching the eyelids.[8]

4. A deep-seated burning pa which emanates from the super medial angle of the scapula, ofte called the scapular syndrome.

11. Stevens, R. W., *A.M.A. Arch. Otolary* 51:196,1950.

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| Alcohol | 5% |

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5. Shoulder pain is located more in the muscle masses overlying the posterior aspect of the scapula and over the anterior fibers of the deltoid and the pectoral musculature than over the rotator cuff insertion.[6]

6. Arm and hand pain is diffuse and difficult to describe. When the patient is asked to put his finger on the pain, he is likely to, with a flourish, indicate the entire upper extremity.

7. Diffuse upper extremity weakness may be differentiated clinically from actual paralysis due to an interruption of the motor nerves. The weakness comes and goes. Attempts to isolate the individual muscles involved are futile.

8. Sensations of numbness in one or both upper extremities are usually subjective only. The patient may be surprised to find that he can feel the sharpness of pinpricks in the "numb" area. When the numbness is localized to the ring and little fingers along with the ulnar side of the hand, it is often taken to indicate nerve root pathology. It should, however, be remembered that this area is supplied by the lowest segments of the brachial plexus, i.e., those most vulnerable to stretching by postural defects such as round shoulders.

9. Excessive fatigue is one of the most common complaints. The patient gets up tired in t morning and stays tired all d She consistently dates this tigue from the onset of the ne shoulder-arm syndrome, notic no incongruity in the parts the past history that point u chronic tired feeling of ma years duration.

10. Nervous tension. The p tients speak repeatedly of th inability to relax, of a feeli as though there were a pressu inside.

11. Personality changes. The vary from a minor restlessn to what the husband may scribe as a complete change character. She snaps at the ch dren, fights with her husba and alienates old friends.

### Physical Findings

After such a long story of tense suffering, the physici may be prepared for some d matic physical findings. Ho ever, examination of the ne reflex and sensory testing, search for specific muscle wea ness, muscle atrophy, or troph changes — all these measur leave him with nothing obje tive. Normal x-rays of the cer cal spine and normal electromy graphic findings deepen the d spair of making an objective agnosis.

While findings designed substantiate a hypothesis

rve root pressure are conspicus by their absence, the search r postural defects is more rerding. High cervical scoliosis often found. Dorsal round ck, stooping shoulders and inased lumbar lordosis are comon.

**bjective Evidences of Emotional Turmoil**

These greet the examiner on ery hand:

1. Fingernails chewed off to e quick.
2. Tremor of the outstretched nd may be so marked that a eet of typing paper laid on e hand shakes off.
3. The palms of the hands may wet with sweat.
4. The pupils may be dilated.
5. The abdomen may be a batfield of surgical scars, particarly for peptic ulcers and genl pathology.
6. The "muscle sand" of psyogenic rheumatism may be lpated on movement of the oulder girdle or may be elicd on neck movements with the thoscope.
7. Slashed wrist scars have en found in several instances.
8. Deep tendon reflexes may be peractive almost to the point a clonus.
9. The vibration of a small tung fork on the tibia may be deribed as an electric shock of nsiderable severity.

**Diagnosis**

The neck-shoulder-arm syndrome with its relatively minor nidus of organic pathology must be differentiated from the severe forms of organic pathology with varying degrees of functional overlay. The following items have been designed to assist in properly evaluating the relative proportions of organic and functional pathology:

ORGANIC

1. No nervous tension.
2. Fatigue not a complaint.
3. Personality changes not remarkable.
4. Muscle weakness patchy.
5. Sensory defects constant.
6. Localized muscle atrophy may develop.
7. Neurologic charts of value in localization.
8. Pain not prominent.
9. Pain radiation follows known patterns.
10. Autonomic components of pain minor.

NECK-SHOULDER-ARM SYNDROME

1. Lots of nervous tension.
2. Excessive fatigue.
3. Personality changes striking.
4. Muscle weakness diffuse.
5. Sensory defects vary.
6. Muscle atrophy, if present, diffuse.
7. No localization possible.

8. Pain dominates picture.
9. Pain radiates far and wide.
10. Pain burning, sickening, nauseating, demoralizing.

### Clinical Course

The usual neck-shoulder-arm syndrome with a simple neck sprain or a postural defect as the nidus of organic pathology is not a seriously disabling condition. It has been noted that the clinical course is not significantly influenced by healing of the simple sprain or by therapy directed to the postural defects, unless the emotional turmoil is resolved. A number of doctors have emphasized the futility of medical treatment prior to the settlement of litigation for the "whiplash" injuries. A case involved in marital strife or in-law trouble is equally resistant to treatment.

It must be remembered that many of these patients have an inherent emotional instability as evidenced by long histories of other psychosomatic complaints. A cure of the neck-shoulder-arm syndrome may amount to no more than a conversion to coccydynia, low-back pain, "ulcers," or some vague neuralgia.

### Treatment

Early settlement of any litigation is imperative when a simple sprain of the neck develops the complication of a neck-shoulder-arm syndrome. It is no l important to resolve any oth emotional turmoil-producing s uation.

Once the patient comes to re ize the nature of her troub she may be able to do someth about it herself, or psychiatric medical social assistance may necessary.

Along with the reduction the emotional turmoil, treatm should be directed to the orga nidus of pathology. Heat a gentle massage help to reli the soreness of a sprained ne Cervical traction is someti soothing. A wry-neck wrap m be beneficial for a short per of intermittent wear. It is m likely that neck braces do m harm than good by fixing the tient's attention constantly her troubles.

The patient with postural d orders can be aided by:

1. A hard bed
2. A small instead of a l pillow
3. Training in good postur
4. Exercises designed to prove lumbar lordosis
5. A shoulder brace or figu of-eight shoulder wrap
6. Infra-red and massage
7. Ethyl chloride spray to interscapular area

Rest, mild sedation and fri ly reassurance play a big par the treatment of either the

ural defect or the simple neck prain with a complicating neck-houlder-arm syndrome. Cariso-rotol has been found to be the most useful drug therapy. It is particularly valuable in preventing acute cases from becoming chronic.◀

---

**se of Levarenterol in ardiac Arrhythmia**

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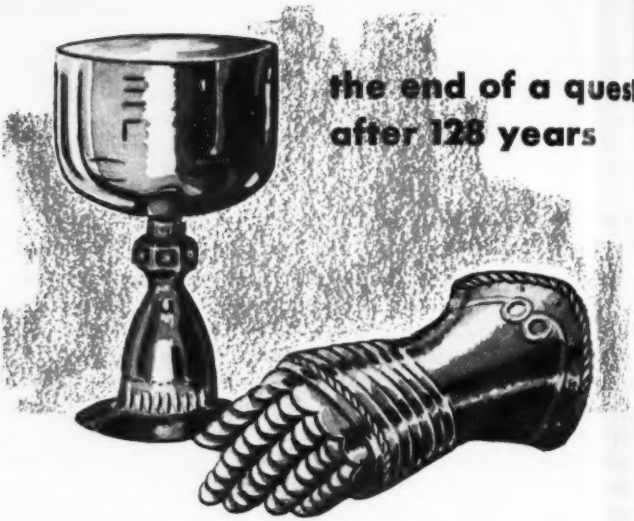
Corday, E., *Ann. Int. Med.*, 50:535,1959.

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# Clinical Experience with Librium in Private Psychiatric Practice

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*Red Bank, New Jersey*

▶*A new psychopharmacologic agent unrelated to the meprobamate, diphenylmethane, reserpine or phenothiazine groups was used in 40 patients with various psychiatric disorders, 80 per cent of whom derived from fair to excellent benefit. Side effects were few, mild, and could be avoided by dosage adjustment.*◀

Chemical treatment of psychiatric illness has become an accepted modality for both the neurotic and psychotic patient whether the predominant symptoms be agitation and anxiety or depression and withdrawal. Many novel drugs have been introduced in the past few years, beginning with the rauwolfia alkaloids; their potency and safety have been evaluated in countless studies, but the search for one with the widest therapeutic applicability and lowest side effect liability continues. Particularly for the patient who has been refractory to many of the available medications, the clinician is tempted, even obliged to put many new preparations to the test of clinical trial.

This is a report of a new chemical agent, methaminodiazepoxide,† which came to my attention early in 1959 and was evaluated in my office practice. Chemically, the agent is 7-chloro-2-methylamino-5-phenyl-3H-1,4-benzidiazepine 4-oxide hydrochloride and is unrelated to any of the tranquilizers of the meprobamate, diphenylmethane, reserpine or phenothiazine group. In animals it proved to have a unique taming effect, was more potent as a tranquilizer and muscle relaxant than meprobamate, showed none of the autonomic-blocking effects of reserpine and chlorpromazine or the hypnotic effects of barbiturates, produced calming and sedation without inhibition of locomotor activity.

In preliminary human trials, it

*Psychiatric Consultant, Monmouth Medical Center, Long Branch, N.J.

†*Librium*®, Hoffmann-La Roche Inc., Nutley, N. J.

TABLE 1

CLASSIFICATION OF PSYCHIATRIC DISORDERS IN 40 PATIENTS

| DIAGNOSTIC CLASSIFICATION | NUMBER OF PATIENTS |
|---|---|
| Depressed state, severe | 2 |
| Depression, complicated by withdrawal, obsessive-compulsive syndrome, paranoid feeling; anxiety, tension or panic states | 13 |
| Anxiety or panic reaction | 6 |
| Menopausal and involutional states | 3 |
| Obsessive-compulsive neurosis | 2 |
| Psychotic reaction and psychotic borderline state | 2 |
| Manic-depressive syndrome | 1 |
| Alcohol dependency and delirium tremens | 2 |
| Schizophrenia | 7 |
| Emotionally disturbed children | 2 |
| TOTAL | 40 |

as reported to reduce anxiety nd tension without impairment intellectual acuity or clouding the sensorium. This evaluaon was made in an unselected roup of private patients who ad been previously treated with variety of tranquilizers and her medications, to which they ad responded poorly. One of e objectives of the study was e testing of the safety of the rug by means of comprehensive boratory tests.

### Material and Methods

The series under study constited 40 patients. Within the limations inherent in differential agnosis of psychoneurotic disrders and the problem of "borerline" cases, the patients comprising this series could be classified in the clinical groups shown in Table 1.

Depression, anxiety and tension, involutional states and relatively undifferentiated emotional disturbances constituted by far the largest number (28) which could be called non-psychotic. The remainder were severely ill, psychotic patients, some with a component of depression.

There were nearly twice as many females (26) as males (14), the ages of the adults 16 to 63, and the two children were 9 and 14 respectively. In the adult group, one patient was under age 20, six were between 20 and 30, 11 between 30 and 40, 11 between 40 and 50, six between

TABLE 2

RESULTS OF TREATMENT WITH *LIBRIUM* ACCORDING TO DIAGNOSTIC CATEGORIES

| DIAGNOSIS | RESULTS | | | |
|---|---|---|---|---|
| | EXCELLENT | GOOD | FAIR | POOR |
| Depression | 5 | 7 | 1 | 2 |
| Anxiety tension | 1 | 4 | | 1 |
| Emotional disturbances in children | 1 | | | 1* |
| Involutional syndrome | 1 | 2 | | |
| Manic-depressive | | 1 | | |
| Schizophrenia | 2 | | 3 | 2 |
| Conversion hysteria | | 1 | | 1 |
| Delirium tremens | 1 | | | |
| Obsessive-compulsive | | 1 | 1 | |
| Alcohol dependency | | | | 1 |
| TOTALS | 11 | 16 | 5 | 8 |

*Behavior improved, but the drug was discontinued because of ataxia.

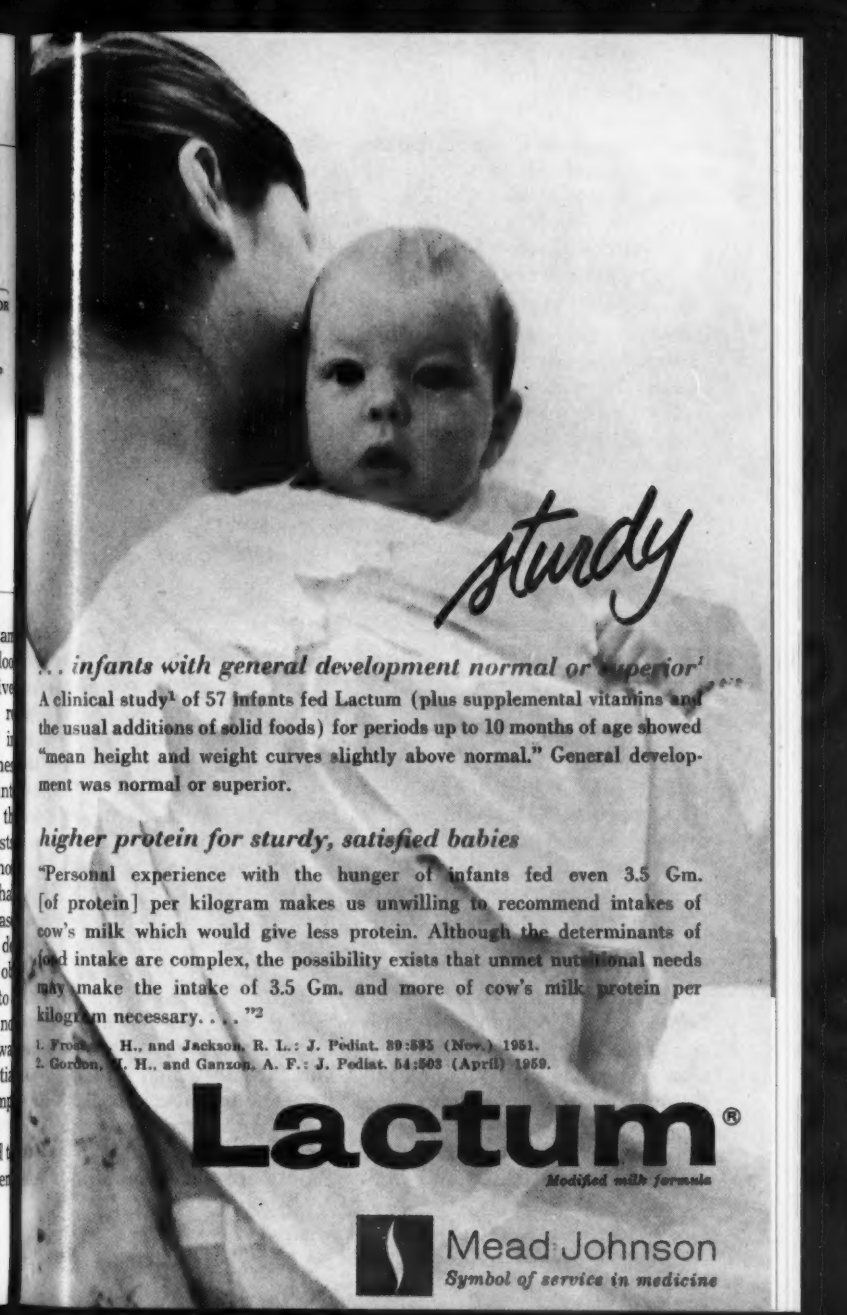
50 and 60, and three patients were over age 60.

The duration of illness extended for from 2 to 10 years. All had a long history of treatment with tranquilizers and other psychotherapeutic medications, as well as psychotherapy at the hands of one or more psychiatrists. Seventeen had been previously hospitalized and 11 had courses of electroshock therapy (EST). The symptoms included marked inner tension, lethargy, insomnia, nightmares, mental and emotional turmoil, panic, withdrawal tendencies, lack of social adjustment, obsessive-compulsion, agitation, resentment, paranoid feelings, avoidance of stressful situations, dependency, alcoholism and delirium tremens.

In addition to a physical exam ination and recording of bloo pressure, all patients receive indicated laboratory tests, r peated usually at two-week i tervals during treatment. The included complete blood count hematocrit, urinalysis, and th following liver function tests thymol turbidity, alkaline pho phatase, serum bilirubin, cepha in flocculation, and transaminas

The duration of treatment, d pending upon the results o tained, ranged from 2 weeks to months. Unless the drug was n well tolerated, medication wa continued until there was parti or complete remission of symp toms.

The dosage varied with need t reduce daytime anxiety and ten




*. . . infants with general development normal or superior*[1]

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1. Frost, H., and Jackson, R. L.: J. Pediat. 39:535 (Nov.) 1951.
2. Gordon, H. H., and Ganzon, A. F.: J. Pediat. 54:503 (April) 1959.

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sion or to relieve insomnia. Some patients received 25 mg. p.r.n., others 10 mg. to 25 mg. b.i.d. or t.i.d., still others 25 to 50 mg. q.h.s. only and some 25 mg. two or three times weekly.

Evaluation of results was based on relief of symptoms, behavior, subjective reports of the patient, laboratory findings during and after medication and the absence or presence of side effects attributable to the drug.

**Results**

The overall results as shown in Table 1 were generally gratifying; in several instances the improvement was dramatic and results sustained after the discontinuation of the medication.

Of the 40 patients, 11 had excellent and 16 good response, while 5 showed partial remission of symptoms. This represents some degree of improvement in 80 per cent of the group. Analysis of the results in relation to the diagnostic categories shows that 2 of the failures and 3 of the "fair" responses occurred among the schizophrenic patients; 2 patients with depression and 1 with conversion hysteria and depression responded poorly, and 1 additional patient with depression improved slightly. The remaining failures were in 1 case each of alcohol dependency and anxiety tension state. Treatment 1 emotionally disturbed child whom the drug was discontinue because of ataxia was considere a failure even though there w marked improvement in beha ior. One woman whose men pausal depression was accomp nied by obsessive-compulsiv syndrome also received litt benefit from the treatment.

All the reports of the liv function tests have been norm to date. There was no change the hematocrit as a result treatment. The hemoglobin lev was slightly lowered by 1.0 to 1 gm., but in no patient did it f to a critical level. The distrib tion of hemoglobin percentag indicated that prior to treatme 28 per cent of the patients had hemoglobin value below 1 gm., and after treatment 48 p cent had a reading below th level. Administration of a liv and iron preparation in the patients restored the hemoglob to its pretreatment level.

The leukocyte count befo and after treatment showed similar curve, except for a sm and clinically insignificant lo ering of the count.

The side effects noted we lethargy, drowsiness, lassitud and fatigue which occurred in patients and ataxia in 1. Most these reactions occurred ear with adjustment of the dosag they were easily controlled.

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## Illustrative Cases

### Case 1

Male, age 51. Diagnosis: Depressed state, with history of depression with panic and withdrawing tendencies over several years. He had become obsessed with his feet, and went from one physician to another looking for a "cure." He was hospitalized and received EST, but upon returning home his condition remained the same. Physical findings and blood pressure were normal, also other blood findings. Librium 25 mg. daily was prescribed. After a few days of treatment, he became elated, but then settled down to a more stable state. After 3 weeks hemoglobin was 13.7 gm. (94.5%), hematocrit 46 vol. % and WBC 7,400.

Six weeks later he was well, and medication was discontinued. After 3 months he reported that he had continued well, although no longer on the medication. There were no side reactions during the medication period, and the result was vast improvement.

### Case 2

Female, Age 35. Diagnosis: Manic depressive psychosis. This patient had a history of alternating periods of hypomania and depression. She recovered from her depression after treatment with isocarboxazide, and later went into a manic phase. She was then placed on Librium, 25 mg. at bedtime. For several weeks she remained at a normal level, and an attempt was made to maintain her on a regular dosage schedule. The first week she received 10 mg. t.i.d. and the second week 10 mg. q.i.d. Then the dose was reduced to 10 mg. daily for 3 weeks, after which it was increased to 20 mg. daily for one week, and 30 mg. daily for another week. Three months after initiation of therapy, she was put on 10 mg. daily for 2 weeks, then on 20 mg. p.r.n. for another week, and finally after 2 more weeks on 10 mg. h.s.

A month later she began having difficulty with her husband, became overtly manic and had to be hospitalized. There were no side effects during treatment; the hemoglobin wa reduced from 12.3 gm. (84.7%) to 11 gm. (79.5%), the hematocrit rose fro 39 to 42 vol. %, and the WBC fro 7,800 to 10,900.

(This case is cited as an exampl of a severely ill patient who showe decided improvement with partial re mission of symptoms, but witho alteration of the basic psychotic dis order.)

### Case 3

Female, Age 63. Diagnosis: Involu tional syndrome. This patient wa first seen in 1950 with involutiona syndrome for which she receive electroshock therapy. In 1959 she wa seen again (reporting to have bee reasonably well in the interim) fo multiple somatic complaints, depres sion and agitation. Put on 25 mg. Librium t.i.d., she reported an imme diate response. After one week, th dosage was reduced to 25 mg. on daily, and after another week, th dose was reduced to 25 mg. even other day. When seen 5 weeks late she was vastly improved on 25 m three times a week, and has sinc remained on this dose with excelle results.

The laboratory findings remaine essentially unchanged, and there wer no side effects reported.

### Case 4

Female, Age 46. Diagnosis: Involu tional syndrome, and a backgroun of chronic anxiety and tension. Th patient reported that for two yea she had become increasingly agitate and depressed to the point where sh could not sleep, was restless, fearfu panicky and had morbid thought When she was first seen in June, 195 she was placed on proclorperazine, mg. t.i.d. After a brief period of im provement she again became agitate and the medication became ineffective Ethcloroynol, glutethimide, a combi nation of meprobamate and benacty zine HCl, estrogenic hormones, an perphenazine were all ineffective.

In May 1959, the patient was starte on Librium, 25 mg. b.i.d. She grad

# mportant new therapy in Peptic Ulcer

**cessation of all symptoms and complete healing in 70 out of 78 cases as reported in Postgraduate Medicine (Oct.) 1959**

"...chymotrypsin offers a new approach to the treatment of peptic ulcer."

In 54 cases, most of them hospitalized, in which chymotrypsin (Chymar) was used in conjunction with other agents "All of the symptoms disappeared and *complete healing of* the ulcer occurred in 49 (90.7 per cent) of the 54 cases . . . Average time for cessation of symptoms . . . 6 days; for complete healing . . . 36 days; average follow-up period . . . 12 months. *In 24 cases* in which Chymar was used alone, "Cessation of all symptoms and *complete healing occurred in 21 (87.5 per cent)* of the 24 cases . . ." Average time for cessation of symptoms . . . 5.8 days; for complete healing . . . 24 days; average follow-up period . . . 25.5 months.

**Conclusions:** "Because of the excellent results obtained in 78 cases of peptic ulcer . . . I strongly recommend its use as a most valuable adjunct in the treatment of this disease."*

*Mozan, A. A.: Postgraduate Med. 26:542, 1959

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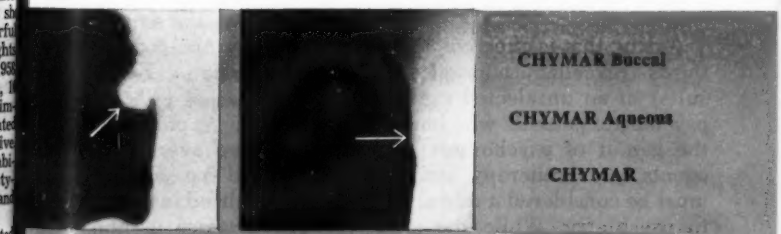


...treatment roentgenogram made January 26, 1957 shows a large ...e on the upper third of the lesser ...vature.

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ually improved, and 3 months later the dose was reduced to one capsule of 25 mg. daily; she has shown decided improvement since, with partial remission of symptoms. Ten days after beginning of treatment, the laboratory findings were all normal, except for a 3+ cephalin flocculation in 24 hours, and 3+ in 48 hours. When the tests were repeated two months later, all values were within normal limits (of interest is the fact that the cephalin flocculation was 1+ in 24 hours and 1+ in 48 hours).

CASE 5

Female, Age 56. Diagnosis: Agitated depression with involutional coloring. When the patient was first seen she gave a long-standing history of psychiatric complaints with depression, extreme nervousness, agitation and hopelessness. She was referred by her son and nephew, both physicians, who had little hope that anything could be done for her. Physical findings and blood pressure were normal. After a few days on Librium, she began to feel well. The initial dosage was 25 mg. twice daily; within 2 weeks she was on 25 mg. daily, and after 4 weeks this dose was reduced to 2 to 3 times per week. After 6 weeks she was taken off the medication, remaining symptom-free. She was able to do her housework, was happier, and had no complaints. This dramatic improvement has continued to date. No side effects were observed, nor were any abnormalities noted in laboratory findings.

## Discussion

A drug that is effective in two-thirds (excellent and good results) of an unselected group of psychiatric patients who had run the gamut of psychotherapeutic agents, psychotherapy and EST must be considered a useful drug in psychiatry. While the group was small, the salutary response in patients well known to us f pat their refractoriness to oth ug drugs is essentially striking. ould was to be expected that the l re severely ill patients would r op spond better to a medication d no signed for the psychoneuro ar population. The less satisfyi n t results were observed in t fac schizophrenics, manic depre cul sives and chronic alcoholi id However, the fact that 12 of t ens 15 patients with depression i ove proved was as gratifying as u teri expected. The relief of sympto e, in the patients with involutio ces syndrome suggests that cont ug. ued trial for this indicati e W should be undertaken. Impro ten ment in the behavior of the t em emotionally disturbed childr ould also merits further study of p ere sible application in pediatrics. g m

Most impressive were the f as i side effects which were inde one mild; discontinuance of the dr ega was required in only 2 patien liru In the remaining 4 patients wi nds side effects, these were eas l controlled by the reduction ema dosage, and as experience w Th gained with the drug, they co e d be readily avoided. oxie

No correlation between dosa evi and degree of effectiveness w ore observed. Apparently the dr is effective over a wide dosa range and the schedule requir individualized adjustment.

The absence of abnormaliti in the laboratory findings, ev

patients who had been on the drug for as long as 5 months, could seem to rule out hepatic or renal toxicity. The observed drop in the hemoglobin content at no time reached a critical level, and could be corrected by iron therapy. Because many other factors—anorexia, increase in circulatory blood volume due to rapid mobilization, changes in menses as female patients improved—may have had a role in lowering the hemoglobin percentage, the observed drop cannot necessarily be attributed to the drug. Similarly, fluctuations in the WBC are dependent to some extent on emotional status, excitement, nervousness etc., which could tend to raise it slightly; therefore, the moderate fall during medication when the patient was improving does not suggest bone marrow depression. The negative results of the serum bilirubin tests in all the patients tends to confirm the lack of clinical side effects as regards the hematopoietic tissues.

The overall impression is that the drug is effective in reducing anxiety and tension and in relieving depression even in the more severely ill patients showing these components, but that it does not alter the basic psychotic disorder, particularly in patients having a psychiatric history of long-standing. It appears to be a safe medication even in cases where chronicity of the disease demands prolonged therapy.

**Summary**

A new chemical agent was administered to 40 patients with a variety of psychiatric disorders, some of long duration.

Varying degrees of effectiveness were obtained in a total of 80 per cent of the patients.

The symptoms most amenable to relief were anxiety, tension and depression.

Side effects were few, mild and could be avoided by dosage adjustment. In one case medication was discontinued because of lethargy, and in another because of ataxia. No abnormalities of laboratory findings were observed.

On the basis of this study, it is felt that Librium represents a step forward in psychopharmacology, with its greatest usefulness in psychoneurotic disorders.◀

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# Pain in the Lower Right Abdomen

HERBERT H. DAVIS, M.D., *Omaha, Nebraska

*Although appendicitis is the first consideration, other manifestations are mesenteric adhesions, intestinal obstructions, fecoliths, or hernia. Careful history must be made to establish a differential diagnosis and to avoid the consequences of a faulty diagnosis. Characteristic findings indicate other pathology.*

Pain in the lower right quadrant of the abdomen suggests the diagnosis of appendicitis first, last, and always. This does not mean that less frequent causes of pain must be left out of consideration. Pain may arise in structures in that location, may be referred from distant areas, may arise as part of a general disease or may be functional. Typically, acute appendicitis begins with pain in the epigastrium or midabdomen and is usually followed by nausea and vomiting. In a few hours the pain becomes localized in the lower right abdomen and there is mild fever and leukocytosis. At that time there is tenderness and usually muscle spasm in the area of the appendix. If the appendix ruptures, the pain, tenderness, and muscle spasm, often after a few hours of improvement, increase in severity and area, and the fever and leukocytosis are higher. The rebound tenderness becomes more marked and in a larger area. In typical appendicitis the other possibilities must be thought of, but valuable time which would delay operation should not be spent on special laboratory tests.

From the Department of Surgery, University of Nebraska College of Medicine.

### Conditions Other Than Appendicitis Likely to Cause Such Pain

A kink from a mesentery shortened by adhesion, or an obstruction by a fecolith in the appendix, will cause hyperperistalsis of the appendix with recurrent pain. This may erroneously be called chronic appendicitis. There is no infection, but this pain may be stopped by appendectomy. This is a difficult diagnosis and should be made with caution. An erroneous diagnosis


while they are planning
their family

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WHENEVER A DIAPHRAGM IS INDICATED

y lead to an appendectomy ich will not relieve the pain. The following table shows ny of the conditions which y cause pain in the lower ht quadrant of the abdomen. is not surprising that the diagsis is occasionally missed.

### Nature of Pain a Clue To Diagnosis

A very sudden onset of severe dominal pain may be due to a dden occlusion of a hollow be, as bowel, ureter or biliary ct. It may also be due to a dden occlusion in an artery or in, as in mesenteric thrombos, aortic embolism, volvulus, isted ovarian cyst or strangued hernia. It may be due to a erforation with a discharge of ghly irritating fluid as in peration of a duodenal or gastric cer or of a typhoid ulcer of the eum.

### Always the History is in Order

One must inquire then as to hether there were any symptms preceding this. Had there en a preceding abdominal opation with symptoms of adhesons following this? Such adhesons can cause a sudden kink the bowel with complete obtruction usually in the small owel. A history of weight loss, hange of bowel habits, loss of trength and appetite, or recent nemia may indicate carcinoma. While intestinal obstruction from this cause usually is of gradual onset the obstruction may come on suddenly. In mesenteric occlusion there may have been a known history of endocarditis. A hernia may have been present for years before a sudden strangulation occurred. While a sudden perforation of a peptic ulcer may arise in a previously healthy individual, there is usually a history of a chronic ulcer for months or years. A sudden excruciating abdominal pain in a person usually in the third week of typhoid fever is caused probably by a perforation of a typhoid ulcer in the ileum.

A volvulus may have a sudden onset in a previously well person, or there may have been previous minor kinks with cramps and hyperperistalsis. In the case of a twisted ovarian cyst, sudden pain may be the first symptom. It may have been known previously that the patient had an ovarian cyst.

Sudden onset of severe colicky abdominal pain with remissions between the crampy pains in an infant below the age of two years is due usually to intussusception.

### Associated Symptoms May be Revealing

Sudden appearance of pallor and shock usually indicates internal hemorrhage. It may be from a peptic ulcer, a perforated

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*Fuchs, M. and Moyer, J.:*
*Diseases of the Chest 35:314, (March) 1959.*

"Premenstrual edema is present in 40% of women and...consists of weight gain, subcutaneous edema, emotional lability, breast turgidity, anxiety and tension." In addition to controlling the objective symptoms of premenstrual tension, HYDRODIURIL may afford relief of subjective complaints including tension, nervousness and headache.

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## CONDITIONS THAT MIGHT CAUSE PAIN IN THE LOWER RIGHT QUADRANT OF THE ABDOMEN

### A. From local lesion

1. *Intra-abdominal organs*
   - a. Bowel
     1. Appendix
        - a. Acute appendicitis
        - b. Obstructive appendicopathy
     2. Cecum and ascending colon
        - a. Carcinoma
        - b. Intestinal obstruction
        - c. Intussusception
        - d. Volvulus
        - e. Diverticulosis or diverticulitis
        - f. Ileocolitis
        - g. Granuloma of cecum
          1. Hyperplastic tuberculosis
          2. Actinomycosis
          3. Blastomycosis
        - h. Bacilliary or amebic dysentery
     3. Ileum
        - a. Mesenteric lymphadenitis
        - b. Acute enteritis
        - c. Regional enteritis
        - d. Tuberculosis
        - e. Typhoid fever
        - f. Meckel's diverticulum
        - g. Adhesions
        - h. Intestinal obstruction
        - i. Mesenteric thrombosis
   - b. Pelvic organs in women
     1. Tube
        - a. Acute salpingitis
        - b. Tuberculous salpingitis
        - c. Tubal pregnancy
     2. Ovary
        - a. Mittelschmerz (rupture of ovarian follicle)
        - b. Twisted ovarian cyst
        - c. Rupture of ovarian cyst
        - d. Ovaritis (mumps)
     3. Uterus
        - a. Dysmenorrhea
        - b. Endometriosis
     4. Pelvic veins
        - a. Varicosities
        - b. Thrombophlebitis
2. *Peritoneum*
   - a. Acute peritonitis (ruptured appendicitis, perforated duodenal ulcer or gallbladder, etc.)
   - b. Hematoperitoneum (trauma, blood dyscrasia)
   - c. Carcinomatosis
   - d. Adhesions
   - e. Air from tubal insufflation
   - f. Tuberculous peritonitis
3. *Retroperitoneal structures*
   - a. Kidney and ureter
     1. Calculus
     2. Tumor
     3. Blood clot in ureter
     4. Stenosis of ureter
     5. Hydronephrosis
     6. Perinephritic abscess
   - b. Bladder
     1. Acute cystitis
     2. Retention of urine
     3. Rupture
   - c. Lymph nodes
     1. Lymphadenitis
     2. Lymphoma
     3. Metastatic carcinoma
   - d. Soft tissues
     1. Hematoma
     2. Psoas abscess
   - e. Ilium and pelvic bones
     1. Osteomyelitis
     2. Sacroiliac joint disease
     3. Metastatic carcinoma
     4. Sarcoma
   - f. Great vessels
     1. Aorta and iliac arteries
        - a. Aneurysm
        - b. Thrombosis and embolism
     2. Vena cava and iliac veins
        - a. Thrombosis and embolism
4. *Abdominal wall*
   - a. Inguinal or femoral hernia
   - b. Varicocele
   - c. Inguinal lymphadenitis
   - d. Undescended testis
   - e. Hematoma
   - f. Fibrositis, myositis
   - g. Herpes zoster
   - h. Radiculitis, neuritis

### B. Referred pain

1. Vertebral lesions compressing nerves
2. Spinal cord lesions
3. Irritation of diaphragm
4. Pulmonary and pleural lesions

### C. General diseases

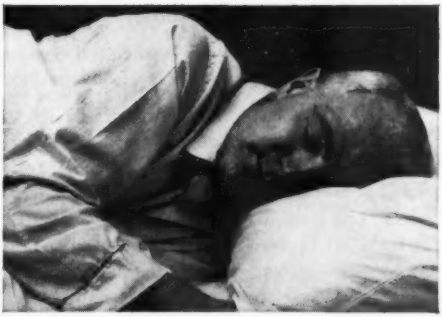
1. Allergy (foods, drugs, etc.)
2. Henoch's purpura
3. Acute rheumatic fever
4. Periarteritis nodosa
5. Exanthemata
6. Brucellosis
7. Typhoid fever
8. Trichinosis
9. Lead colic

### D. Functional pain

the unc mfortable patient for the distraught patient for the overtired patient

# relaxing, restful sleep

without barbiturates, bromides or narcotics



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aneurysm or rupture of an ovarian cyst or ectopic pregnancy. The ulcer frequently has been diagnosed by chronic symptoms and signs for years. There is usually hematemesis or melena. In the case of an aneurysm there may have been previous back pain, known hypertension or arteriosclerosis. In the case of a ruptured ectopic pregnancy there may have been a missed menstrual period. There may be some vaginal bleeding at about this time and a vaginal examination may be diagnostic.

### Characteristics of Pain Favor Different Diagnosis

An acute inflammation may cause pain gradually increasing over a few hours or two or three days, with increasing tenderness, fever and leukocytosis. Such would be the case in acute appendicitis, acute salpingitis, diverticulitis, and mesenteric lymphadenitis. Salpingitis is usually bilateral and accompanied by leukorrhea and a much higher sedimentation rate than in appendicitis. Diverticulitis is most common in the sigmoid colon in which instance the pain and tenderness are usually found in the left side. The rare cecal diverticulitis may have symptoms and signs indistinguishable from those of acute appendicitis. In Meckel's diverticulitis the pain and tenderness is usually more in the central abdomen.

Mesenteric lymphadenitis ma be impossible to differentia from appendicitis. Its diagnosis never confirmed without explo ation of the abdomen. If at oper tion for acute appendicitis, th appendix is found to be norm in children always look at th nodes in the mesentery of th area. It is wise also to exami the lower three to four feet ileum to exclude Meckel's dive ticulitis.

### Associated Symptoms May Lead or Mislead

Acute diarrhea with pain su gests acute enteritis. A bow movement will relieve the pa usually for a short time. Di rhea is not a frequent sympt in acute appendicitis. Charact istically a bowel movement do not relieve the pain in acute a pendicitis. Diarrhea persiste for weeks or months is chara teristic of amebic or bacilla dysentery, functional or ulce tive colitis, regional enteritis a tuberculous enteritis. A sigmo oscopic examination, intesti x-rays and stool culture may diagnostic.

Blood in the stool may indic benign or malignant ulcerati It may occur with mesente thrombosis or intussusception it is red blood not mixed w stool, it is most commonly due hemorrhoids.

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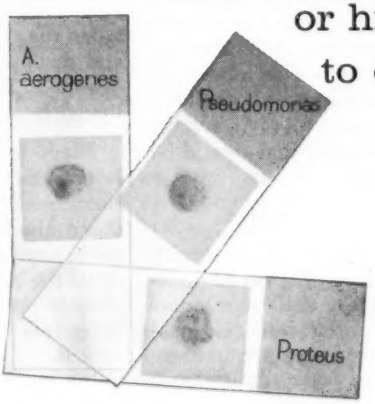


Finland, M.; Hirsch, H. A., Kunin, C. M.: Read at enth Annual Antibiotics posium, Washington, D.C., ember 5, 1959. 2. Hirsch, A.; Kunin, C. M., and Finland, M.: **München. med. nschr.** To be published. Roberts, M. S.; Seneca, H., Lattimer, J. K.: Read at enth Annual Antibiotics posium, Washington, D.C., ember 5, 1959. 4. Vinet, J. P.; Hogan, J., and Sanford, J. P.: **Ibid.**

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A mass in the lower right quadrant may be a tumor, a loop of bowel, an abscess or a hematoma, or even a localized area of muscle spasm in the abdominal wall. If the onset is acute with shock, it may be a hematoma. If the pain started gradually and increased over one or two weeks time with considerable tenderness, fever and leukocytosis, it may be an abscess. A distended urinary bladder, ovarian cyst, and fibromyoma of uterus may cause a mass. Percussion note is flat over it. If percussion reveals tympany over the mass it is probably distended bowel as in intestinal obstruction, including volvulus. If the mass is more of an outstanding finding than pain or tenderness, it may be a carcinoma of the cecum or ascending colon, hyperplastic tuberculosis, actinomycosis or a pelvic tumor. A vaginal examination should be done in women.

**Special Examinations**

If the diagnosis is in doubt, vaginal examination, rectal digital examination and sigmoidoscopic examination and also gastro-intestinal x-rays are indicated. If all these findings are neg tive it must be remembered th pain may be referred from oth areas. Physical examination a x-ray may show a lesion of t lung, pleura, vertebrae or spin cord. If there are other gene symptoms it must be remem bered that some general disea may have abdominal symptom

**Pains of Functional Origin**

If, after all the above studi have been done and the sym toms follow no disease patte the pain may be on a functio al basis. The patient may have nervous temperament, there m have been emotional problem the symptoms may be wo when the patient is thinking of and disappear when attention diverted. The pain may be r lieved by a placebo.

There is a cause for all pa It may be organic or it may functional. The more care that taken, the fewer mistakes will made and more persons will r ceive the proper treatment to t greater advantage in health a happiness of patients and do tors.◀

# fficacy of a Bath Oil in the Management f Dry Skin

GUSTAV WEISSBERG, M.D.,* *New York, New York*

*he effects following daily use of ater-dispersible bath oil were ob- ed in 118 patients whose skin rders included senile skin, dry due to constitutional changes, nic changes, ichthyosis, and atop- dermatitis. Skin dryness was re- ed in all patients within two ks.*◀

he smooth and soft texture of rmal skin is due primarily to proper water content of the atum lucidum and corneum of epidermis.[1] When there is a at loss of water from the skin, e to extreme dryness of the nosphere for a prolonged time due to excessive and repeated posure to the sun, the normal n will become dry, scaly and pped. It is believed that the n lipids play a role in keeping s water loss at a minimum in rmal skin by forming a water- oil emulsion in the uppermost ers of the epidermis. From this emulsion the evaporation proceeds at a slow pace.[2] When, for whatever reason, the amount of skin lipids is reduced, and the evaporation of water from the skin is increased, the superficial layers of the epidermis peel off more easily, thus reducing further the capacity of the skin to retain water, leaving the skin dry.

Xerosis of the skin, be it of metabolic, hormonal, constitutional or environmental etiology is, even without complications, an annoying symptom. Dry skin is scaly, itchy, fissures easily, and therefore is subject to superficial infections. It is less esthetic, looks older than normally moist skin, and is psychologically disturbing to patients of either sex. Many middle-aged persons who spend time and money acquiring a deep tan to look younger, achieve the opposite result, aging their skin prematurely by excessive sun exposure. Emollient

istant Clinical Professor of Dermatology, y York Medical College.

Pillsbury, D. M., et al., *Dermatology*, W. B. Saunders Company, Philadelphia & London, 1957.

2. Blank, I. H., *J.A.M.A.*, 164:412,1957.

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intments and creams and lotions re popularly used to counteract he resultant dryness. In contrast o these measures, the oil bath is n easy way to lubricate the en- re skin. It leaves an invisible, ery thin film of oil which clings o the skin and does not easily ub off. This film assumes the ole of the natural skin lipids of he normal skin, and thereby eeps it softer and less vulner- ble to actinic, thermal and me- hanical traumata.

### Clinical Study

This clinical study was under- ken to evaluate the effects of a ath oil* on dry skin. The deci- ve criterion for the choice of atients was only whether their kin was very dry. Their skin iseases, whether or not causal- y related to the xeroderma, ere of secondary importance in he selection of the subjects.

### Method and Materials

A group of 118 patients from rivate and clinic practice were bserved from four to 16 weeks, t weekly or bi-weekly intervals. f these, 49 had senile skin, 26 ere younger patients having ry skin associated with hypo- yroidism, diabetes, etc., 13 had ry skin changes due to actinic nd x-irradiation, 10 had ich- yosis and 20 atopic dermatitis. n the beginning of the study the patients were divided into three groups that were to:

1. Bathe daily.
2. Bathe every other day.
3. Bathe twice weekly.

Eight cc. of the bath oil was added to the bath. When it was seen that the first group did best, the other schedules were abandoned, and all patients advised to take a daily oil bath. Treatment of their respective skin diseases continued as before, except in those cases in which the xeroderma was the only presenting symptom. In these cases only the oil bath was used. About 69% of the patients were females, and the ages of all of the patients ranged from two to 84 years; 70% were over 40 and 38% over 60 years old.

### Results

The daily oil bath reduced the dryness of the skin in all patients responding favorably within two weeks. Scaling disappeared, and in varying degrees the skin became softer and smoother, as shown in Table 1. The clinical evaluation of the therapeutic response of the xeroderma to the oil bath would not vary much with different observers. However, when several modalities were used concomitantly in the treatment of the associated skin conditions, it became difficult to assign the proper credit to the different factors for the

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in contraception . . .

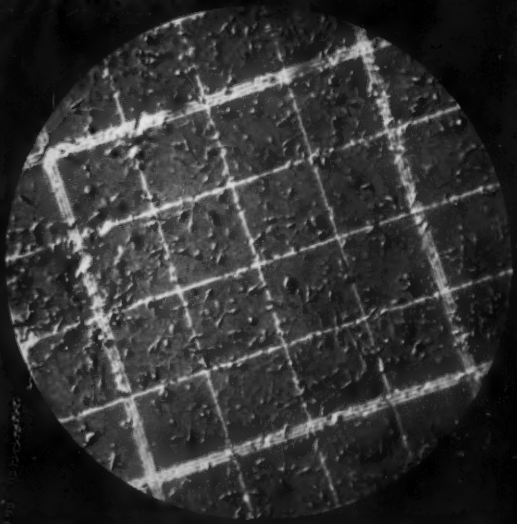

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TABLE 1

RESPONSE OF SKIN DISEASES TO DAILY OIL BATH

| SKIN CONDITION | NUMBER | RESPONSE | | |
|---|---|---|---|---|
| | | EXCELLENT | GOOD | POOR |
| Senile skin | 49 | 32 | 13 | 4 |
| Dry skin in younger patients (hypothyroidism, diabetes, etc.) | 26 | 14 | 11 | 1 |
| Actinic changes (sun, x-radiation) | 13 | 9 | 4 | |
| Ichthyosis | 10 | 3 | 4 | 3 |
| Atopic dermatitis | 20 | 8 | 10 | 2 |
| TOTALS | 118 | 66 | 42 | 10 |

hieved results. This difficulty as largely overcome by con- nuing the routine dermatologic erapy and eliminating and re- stituting the oil bath at pro- nged intervals in 78 of the pa- ents. The response of the skin seases in this group to the oil th is given in Table 2.

### Comment

Patients with chronic irre- ersible skin conditions, such as nile skin, radiodermatitis, burn ars, chronic actinic skin, or hthyosis were greatly benefit- l, even though the primary con- tion was not altered. A num- er of patients with acute in- mmatory dermatoses, e.g., ute solar dermatitis, contact rmatitis, dyshidrosis, pustular oriasis and drug eruption, de- ved more benefit from the oil th than from the customary rmatologic bath additives. nogenital neurodermatitis and nummular dermatitis, so frequently seen on the dry skin of persons past 50, responded more rapidly and more satisfactorily when the bath oil was included in the treatment regimen. Excellent results were achieved in elderly persons who bathed very infrequently because of the pruritus caused by their dry skin. They could enjoy a daily oil bath without fear of punishing their moisture-deficient skin. Fissures healed and superficial infections caused by scratching and lack of cleanliness were prevented. There were several patients with musculo-skeletal conditions for whom frequent and protracted warm baths had been prescribed. The addition of the oil to the therapeutic bath prevented the drying of the skin, and its itching, commonly seen in hydrotherapy. Elderly diabetics who had to bathe daily to prevent skin infections, also noted a de-

TABLE 2

RESPONSE OF SKIN DISEASES TO DAILY OIL BATH

| SKIN CONDITION* | NUMBER | BENEFITED | NO BENEFIT |
|---|---|---|---|
| Nummular dermatitis | 20 | 19 | 1 |
| Circumscribed neurodermatitis | 10 | 10 | |
| Parapsoriasis | 3 | 1 | 2 |
| Psoriasis | 8 | 3 | 5 |
| Intertrigo | 4 | 4 | |
| Toxic eruption | 3 | 2 | 1 |
| Dermatitis herpetiformis | 3 | 3 | |
| Stasis dermatitis | 3 | 2 | 1 |
| Atopic dermatitis | 20 | 11 | 9 |
| Acute dermatitis solaris | 4 | 4 | |
| TOTALS | 78 | 59 | 19 |

*Conditions with irreversible changes in the skin, e.g., ichthyosis, chronic actinic changes, radiodermatitis etc., are not included.

crease in skin irritation with the addition of the oil to the bath.

The oil bath is not a cure for dry skin. When it is used continuously it is extremely beneficial, but when it is discontinued the dryness recurs as before. This is illustrated by a man of 72 years with severe xeroderma and scrotal neurodermatitis. He was treated with a 1% hydrocortisone cream and superficial x-ray therapy, as well as the oil bath. There was great clinical improvement within four weeks. The bath oil was discontinued, and two weeks later, in spite of continuation of local medication and radiation therapy, the condition relapsed. Resumption of the oil bath again resulted in great improvement.

There were no reactions of primary irritation or allergic sensitivity. Twenty-five subjects were patch-tested with the o 15 of them had previously us the oil, and the 10 others we tested again after three wee according to the Schwartz-Pe prophetic patch test method. A tests were negative.

### Summary

One hundred and eighteen p tients with dry skin, either pr mary or secondary to a dermat sis, were treated with a wate dispersible oil in their bath part of the therapeutic manag ment. Over 90% were benefite and considered the routine easy and highly acceptab method of lubricating the enti skin. Uncomplicated xeroderm with pruritus is greatly relieve by this modality alone. Associa ed skin diseases require standa dermatologic therapy in additio to the soothing oil bath.◀

# The Problem of the Adnexal Mass

MICHAEL NEWTON, M.D.,* *Jackson, Mississippi*

*The greatest problem in treating adnexal masses is early detection of ovarian carcinoma, this ascertained only by careful history and physical examination. If malignancy is not definitely established at operation, reproductive function should be preserved in all but a few exceptional cases.*

The importance of a mass felt lateral to the uterus on vaginoabdominal or recto-abdominal examination lies in the fact that it is often extremely difficult to determine its nature and to tell whether or not it is malignant. If malignant, it is likely to be a carcinoma of the ovary. In this disease the five-year survival rate is 20% to 30% in most series. Therefore, one must use every possible method of making a clinical diagnosis, and of setting up definite standards for management of the adnexal mass.

## Possible Causes

Some of the possible causes of an adnexal mass are:

1. Ovarian — cyst or tumor, benign or malignant.
2. Tubovarian—abscess or cyst.
3. Tubal—hydrosalpinx, pyosalpinx, ectopic pregnancy.
4. Uterine — pregnancy, myoma, carcinoma.
5. Extra-genital—carcinoma or diverticulitis of the colon, appendicitis, pelvic kidney, retroperitoneal tumor.

## General Considerations

An accurate history is essential. Often the adnexal mass is discovered on routine pelvic examination. Even in asymptomatic cases a careful history will do much to indicate the possibility of an adnexal mass being present and may give a clue as to its nature.

Points valuable in diagnosis are age, general symptoms, symptoms of pregnancy, abdominal pain, intestinal symptoms, urinary tract symptoms, and menstrual disturbances.

*Professor and Chairman Department of Obstetrics and Gynecology, University of Mississippi School of Medicine.

**Relative Significance as to Age and Condition**

In the woman under 30 years, benign ovarian cysts, pelvic inflammatory disease, endometriosis or complications of pregnancy are more common. From 35 to 50 years, subserous, pedunculated, or intraligamentary myoma is common: ovarian masses are more likely to be malignant. In the woman over 50 years a cystic or solid malignant ovarian tumor is of prime importance.

Weight loss, weakness or malaise may indicate a far-advanced malignant tumor. Fever may suggest pelvic inflammatory disease or an accident occurring in an ovarian cyst or pedunculated myoma.

In the younger woman nausea, frequency of urination, or breast changes may suggest that an adnexal mass is due to an ectopic pregnancy. Even an intrauterine pregnancy may present a diagnostic problem. Recently, on our service, at operation a right adnexal mass turned out to be a cystic pregnancy in the right horn of a bicornuate uterus.

Abdominal pain is likely to call attention to the presence of an adnexal mass. The pain described is usually dull and located on one side of the lower abdomen. Acute pain may indicate inflammatory changes, or perhaps an accident occurring in a cyst or pedunculated myom
Recurrent attacks of pain a
suggestive of pelvic inflamm
tory disease, particularly whe
they occur after menstruation.

Changes in bowel habit, me
ena or bleeding at stool may i
dicate the possibility of a lesi
in the colon. Nausea and vomi
ing, in the absence of pregnanc
may suggest an intestinal rath
than a pelvic disorder. Urina
tract symptoms are more like
to be due to disease of the uter
or to pelvic relaxation, althou
pressure on the bladder by
adnexal mass may cause sym
toms. Irregular uterine bleedi
usually indicates some abn
mality of the endometrium a
this may be due to changes
ovarian function. An accura
menstrual history may, the
fore, be of help in revealing t
nature of an adnexal mass.
topic pregnancy is often acco
panied by irregular uteri
bleeding; postmenopausal ble
ing may be due to stimulation
the endometrium by a functi
ing ovarian tumor; or polycys
disease of the ovaries may res
in amenorrhea or irregular ut
ine bleeding.

**Pelvic Examination Necessary**

Only by including a pelvic e
amination in the general phy
cal examination of the fem
patient can the adnexal mass
found, and an attempt be ma

diagnose its nature. Finding e signs of pregnancy in the urse of a general examination ay indicate the possibility of an topic gestation. Weight loss, as- es or nodularity of the liver ay suggest far-advanced malig- nt disease. The discovery of a eural effusion may call to mind eigs' syndrome, associated with roma of the ovary. The find- g of a lower abdominal mass one side or the presence of nderness or rebound tender- ss may be helpful in diagnos- g the adnexal mass.

On pelvic examination, the ost important characteristics of e mass itself are position, con- stency, shape, tenderness, and ze.

The important thing about the sition of an adnexal mass is hether it is situated close to the erus or well out against the lvic wall. Provided that the pa- ent is not pregnant, insertion of sound into the uterus will help separate the mass from that rgan. An adnexal mass may be ystic, semi-solid or solid. The ick capsule of the dermoid cyst s a peculiar feeling which may entify this lesion. The solid varian tumor is more likely to e malignant; so is a nodular ass.

A sausage-shaped mass is ore likely to be of tubal origin; n irregular one suggests an inflammatory origin. The mobility of the mass may be an important consideration. Tenderness suggests inflammatory changes or an accident occurring in a cyst or pedunculated myoma, such as torsion or hemorrhage.

Comparison of size with a golf ball, lemon, orange, or grapefruit is of little value. It is far better to estimate the diameter in centimeters. A convenient point of reference is the amount of dilation of the cervix as observed during labor.

**Further Investigative Measures**

Additional diagnostic procedures include a flat plate x-ray of the abdomen, culdocentesis, culdoscopy, culdotomy and intraperitoneal insufflation of $CO_2$. An unmarried white girl of 20 was recently seen with a history of intermittent left lower quadrant abdominal pain for the past year. Initial pelvic examination revealed no adnexal mass. However, x-ray of the abdomen disclosed a rounded shadow in the pelvis containing calcification. At a subsequent pelvic examination this mass was felt in the left adnexal region and at laparotomy proved to be a 7 cm. dermoid cyst on a long twisted pedicle. It appeared likely that at the first pelvic examination the cyst had been lying out of the pelvis and on that account had not been palpable.

Culdocentesis may be of value in the diagnosis of a ruptured ectopic pregnancy and on our service is performed routinely when this is suspected. Culdoscopy has proved to be of value in the hands of those experienced in its use. Culdotomy, with adequate visualization of the pelvic structures, may occasionally be useful. The intraperitoneal injection of $CO_2$ has been of particular value in the diagnosis of polycystic ovaries. Hysterosalpingograms may be of help in some cases.

### Mode of Management

The basic problem is the decision as to whether or not to operate. If the patient has ovarian carcinoma, delay is fatal; on the other hand, reproductive life should not be ended by unnecessary operations on the ovary.

If the adnexal mass is over 6 cm. in diameter operation is generally indicated, provided that the patient is a reasonably good surgical risk. As definite a diagnosis as possible should be made in advance, for discussion with the patient and her family. However, if the diagnosis is not clear, operation is indicated because most of these masses are neoplastic. A possible exception might be in the case of an inflammatory mass due to tubovarian abscess where a "cooling off" period is frequently desirable. Masses of 6 cm. in either organ usually r quire surgical treatment, a the threat of ovarian carcino is sufficient to urge explorati

Management at operation d pends on the findings. Thorou exploration of the abdomi cavity and familiarity with t gross appearance of ovarian t mors is essential. The advice a competent pathologist and t sue diagnosis by frozen secti are invaluable.

If the diagnosis of ovarian c cinoma is made, bilateral s pingo-oophorectomy and to hysterectomy are preferre Opinion varies as to whether t omentum, a frequent site metastasis, should be remov On our service this is usua done. Great care must be tak to avoid spilling the contents a cyst during removal. It is oft best to remove the ovarian t mor or tumors first and th proceed with the hysterecto If extensive metastases a found, the primary tumor sho be removed if this can be do without serious danger to t patient. If the situation appe completely hopeless, one or m biopsies should be obtained fr representative areas. The aft treatment of patients who h been operated on for ovarian c cinoma is by no means standa ized. External radiation, int peritoneal instillation of rad

tive gold and the use of chemotherapy all appear to have some place.

When the malignant nature of the adnexal mass cannot be clearly established at operation, management varies with the type of cyst, the age of the patient and the associated disease found. Conservation of reproductive function should be the watch-word in patients still in their childbearing years. If the lesion appears to be a benign cystic or solid tumor of the ovary, only the tumor should be removed, and, where possible, ovarian tissue preserved. If a pathological diagnosis of cancer is made later, reoperation and removal of the other ovary and uterus can then be performed.

In case of dermoid cysts, common in the younger woman, where possible the capsule should be incised and the cyst shelled out after the method of Schreier.[1] The capsule usually contains flattened ovarian tissue and this can be repaired by plication with fine sutures. It is generally advisable to bisect the opposite ovary, since dermoids are bilateral in about 12% of instances. The management of endometriosis in the woman who desires children consists of resection of the cysts and cauterization of endometrial implants.

[1] Schreier, P. G., & Alexander, A., *Mississippi Doctor*, 37:83,1959.

In the older woman total hysterectomy and bilateral salpingo-oophorectomy may be indicated. Pelvic inflammatory disease in a patient with a long history of attacks requires removal of both tubes, both ovaries and the uterus. In the postmenopausal woman, if there is any question of malignant growth in the adnexal mass, bilateral salpingo-oophorectomy and hysterectomy should be performed. Opinion differs as to whether, in the presence of an obviously benign cyst of the ovary, the other ovary and the uterus should be removed.

**Management of the Small Mass**

The most difficult problem in the management of the adnexal mass is presented by the mass of 6 cm. or less in diameter. Ectopic pregnancy demands immediate operation, with removal of the affected tube, conserving the ovary if possible. In the younger woman with no or minimal symptoms, cystic adnexal enlargements are commonly due to follicular or corpus luteum cysts of the ovary. Since these may regress spontaneously, observation and reexamination four to six weeks later is indicated. If it persists, or increases in size, or symptoms suggest torsion or hemorrhage, removal is indicated. In the woman past 40, there should be little hesitation


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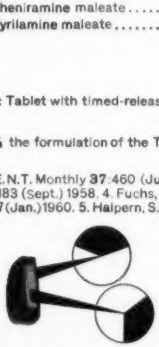

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in proceeding to operation.

If no definite mass is palpable on satisfactory examination (under anesthesia if necessary), it is likely that any troublesome symptoms are due to some other cause which needs careful investigation. Often, psychic or other causes may be found to explain the clinical picture. In case a small ovarian cyst is found at laparatomy for other cause, removal of the ovary is generally unjustifiable, unless a definite diagnosis of carcinoma can be established. Removal or puncture of the cyst may be performed if it is large, but frequently it is best left alone.

In detection of the adnexal mass in the child or young nulliparous woman examination under anesthesia can be very useful. One should not usually resort to laparotomy unless the existence of an adnexal mass is definitely proved before hand.

In general, the rules stated above regarding the size of the adnexal mass apply also in pregnancy. Although carcinoma of the ovary is rare in the pregnant, it should be borne in mind, particularly in the woman past 30. The corpus luteum of pregnancy often attains a considerable size in the first trimester. Removal of this before its func tions have been taken over b the placenta may cause abor tion. Unless symptoms are acut laparotomy for removal of a adnexal mass should generall not be undertaken during preg nancy until after the 12th week

**Summary**

1. The greatest problem in th diagnosis and management o the adnexal mass is the early de tection of ovarian carcinoma.

2. Only by a careful histor and general physical and pelvi examinations can the presenc and nature of adnexal masses b detected.

3. Operative treatment is ge erally indicated for adnexa masses which are 6 cm. or mor in diameter. The operative man agement depends upon the find ings at laparotomy.

4. With smaller adnexa masses observation is advisable particularly in the younge woman, except in the case o ectopic pregnancy.

5. When malignancy is no definitely established at opera tion, conservation of reproduc tive function, with certain ex ceptions, should be the watch word of every surgeon who en ters the pelvis.◀

# cne Following the Administration f Antibiotics

GEORGE E. MORRIS, M.D.,* *Boston, Massachusetts*

*Review of seven cases of cystic ne precipitated by administration antibiotics suggests that staphylo-cci residing on the skin become thogenic when antibacterial activi- diminishes the number of skin- elling, antibody-producing bacteri- florae. These cases may respond staphylococcic toxoid and diet.*

Since 1950, many clinicians ave advocated the use of anti-iotics in the treatment of acne, articularly in its pustular, nod-lar and cystic forms.[1-10] Most uch reports represent the re-ults of research work done by individuals in an attempt to prove the efficacy of certain specific antibiotics under scrutiny.[11-22] All have stressed the value of antibiotics in acne treatment. It was inevitable that some observer would find acne cases precipitated by the administration of antibiotics. These findings are in such contrast to what is still being published,[6-10,16-22] that

Member of the Committee on Occupational Dermatoses, of The Council on Industrial Health, A.M.A.

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this report is in order. When two of my colleagues were asked if they ever saw acne following the administration of antibiotics, one answered, "I never even thought of it," and the second said, "It never occurred to me to ask."

That this phenomenon should occur might well have been anticipated. Aspirin is known to reduce fever in most cases, but in some individuals it will cause fever; alcohol will stimulate some people, but will put others to sleep; morphine, or hyoscine, will quiet most—but will agitate others. Therefore, it should not be thought strange that antibiotics, though helping many acne cases, will precipitate other cases. The following cases are illustrative:

## Case Reports

### Case No. 1

A woman of 25, a secretary with no history of acne, who had never been seen by a skin specialist, and had "never needed treatment for her skin," was involved in an auto accident. Subsequently, 22.5 million units of penicillin were administered. While still receiving the drug, towards the seventh or eighth day, she developed 20 to 30 grape-size cysts on her face and neck. Her dentist, who had taken "before" and "after" pictures, remarked on the rapid onset of her cystic acne.

### Case No. 2

A teen-age daughter of a doctor was treated and cleared of acne, as was her sister. Thirty days after discharge, one of the girls had a cold, for which her father prescribed two penicillin tablets. Within 12 hours, 8 to 10 pimpl appeared on her face. These we thought to be due to the penicill which had been given prior to th flare-up. In the last 17 months, neith she nor her sister has had any sim lar recurrence.

### Case No. 3

A married woman of 30, with history of prior acne or previous trea ment for skin disease, was given sulfa tablets 4 times a day for fi days, then came to my office for trea ment of acne. She had multiple blis cysts. She stated that she had nev had any trouble with her face befo taking these sulfa pills.

### Case No. 4

A boy of 19, having been cleared acne the year before by the aid a staphylococcic toxoid, was admi ted to one of the National Servi Academies. His skin was clear for months, when, upon removal of h appendix, prophylactic penicillin w given him by injection. The acne re curred on his face within five da His appearance was so bad that h was given leave to return home f re-treatment.

### Case No. 5

A boy of 17, according to his mothe had had no trouble with his skin pri to when he underwent an appendec tomy. At that time, he also was give a prophylactic antibiotic. The bo stated that on the day of his retur from the hospital his face started t break out with "big pimples," whic had persisted in growing worse unt he was brought into my office.

While antibiotics may prove o value in some cases of acne, com mon sense is called for in thei administration. The followin cases illustrate the necessity o close attention during suc treatment:

# 90% of anxious, agitated and apathetic office patients calmed without drowsiness and with normal drive restored...

**on one or two 0.25 mg. tablets b.i.d.:**

This is the pattern of performance for

# PERMITIL®

Fluphenazine dihydrochloride

■ In 1164 patients with anxiety and anxiety-induced fatigue or depression, PERMITIL, administered in small daily doses of 0.5 mg. to 1 mg., produced significant improvement in 90%.*

■ PERMITIL is virtually free from side effects at recommended dosage levels.

■ Patients become calm without being drowsy and normal drive is restored.

■ Onset of action is rapid; effect is prolonged. ■ PERMITIL does not potentiate barbiturates or non-barbiturate sedatives and can be used with impunity with such agents.

*How to Prescribe* **PERMITIL:** The lowest dose of PERMITIL that will produce the desired clinical effect should be used. The recommended dose for most adults is one 0.25 mg. tablet twice a day (taken morning and afternoon). Increase to two 0.25 mg. tablets twice a day if required. Total daily dosage in excess of 1 mg. should be employed only in patients with relatively severe symptoms which are uncontrolled at lower dosage. In such patients, the total daily dose may be increased to a maximum of 2 mg., given in divided amounts. Complete information concerning the use of PERMITIL is available on request.

*Supplied:* Tablets, 0.25 mg., bottles of 50 and 500.

*Recent compilation of case reports received by the Medical Department, White Laboratories, Inc.

White WHITE LABORATORIES, INC., *Kenilworth, New Jersey*

### Case No. 6

A boy of 14 was brought in to the office, and his mother stated "We cannot afford to take this child to 'X' Clinic any more. He has been getting capsules (one of the tetracycline group) for a period of 52 weeks, at a cost of over $12 per week, and his pimples and blackheads are just as bad today, as when this treatment was started. We just cannot afford to keep on spending all this money every week for unsuccessful treatment. Isn't there some other way you can clear him of his acne?"

### Case No. 7

A girl of 16 who had been treated for acne with penicillin by mouth for a period of 17 months, without results, was referred to me by her uncle because I had cleared his daughter the year before without the use of an antibiotic, and with the use of a new skin cleanser, a sulfur paste, a series of staphylococcic toxoid injections, and dietary restrictions. My first reaction was one of surprise that it had taken so long for the family to refer this patient to me, for in my experience if you clear one 'teen-ager of acne, you will shortly be seeing other sisters, brothers or cousins as soon as (and if) they develop this condition. The hiatus in this case was explained by the fact that the girls were cousins on their fathers' side, and thus the mothers involved were not in constant communication with one another—telephonic and otherwise—as would be the case had the mothers been related. Thus, it took over a year for the fathers to get around to talking about their children and their problems.

The only explanation that comes to my mind is that these people had been living with staphylococci on their skin but without developing acne. When the antibiotics were administered, the bacterial flora of t skin was diminished and any a tibodies they were producing being on the skin were lessene When the antibiotics were sto ped, the bacteria grew fast than the circulating antibodi and thus the acne was precip tated. In this regard, one r searcher recently stated that wonders about the wisdom of u ing antibiotics in the treatme of acne when so many staphyl cocci are becoming resistant these drugs.[23] Possibly we a developing organisms which a capable of causing more serio disease. For obvious reasons, attempt was made to re-admi ister the drugs once the patien had been cleared of their acne.

### Summary

Antibiotics are continually b ing advocated for the treatme of acne.

Cases are reported in whi acne seemed to have been prec pitated by the administration antibiotics.

Two cases are reported of fa ure of acne to respond to an ant biotic over periods of 52 week and 77 weeks.

A theory is presented as to th reason for acne being precip tated by antibiotics.◀

23. Laden, E. L., Acne Vulgaris, in Mode Dermatologic Therapy, McGraw-Hill Bo Company, Inc., New York, 1959, p. 221

# Therapy of Overweight Children

MORTEN B. ANDELMAN, M.D., *Lincolnwood, Illinois*

*The complex factors causing or contributing to obesity in children must all be considered before determining treatment. In 94 children whose overweight conditions were apparently due to overeating, moderate diet restriction plus administration of an antiobesity agent caused average weight reduction of 19.6 pounds.*◀

A problem seen frequently in private pediatric practice is that of the overweight child. This is more often a problem after the first decade and during adolescence, than at any other period of a child's life. Some overweight children develop extreme anxiety because of the parents' oversolicitude and the social aspects involved.

## Overweight not Synonymous with Obesity

Obesity does not necessarily have the same meaning as overweight. A well developed musculature may be the main, even the sole, cause of the excess of a child's weight. Also, care should be taken that a normal distribution of fat in areas such as the extremities, hips, suprapubic region and abdominal pad, not be labeled as obesity. The recognition and acceptance of the fact that a rapid horizontal growth phase in pre-adolescent and adolescent children may result in the deposit of excessive subcutaneous fat which is, by and large, only a temporary condition. Fat distribution is rarely the result of any existing endocrine problem. Many complex factors may enter into the explanation for any particular overweight child from the psychologic to family eating habits.

A careful dietary history is important in establishing the eating patterns of each patient. More often than not one will find that a child eats too often or too much probably as a result of psychologic urges to satiate and gratify certain needs. It then becomes the obligation of the physician to search out these needs and substitute, if possible, some other source of satisfaction to the child. This is not always an easy thing to do. All of the experiences and

resources of the practitioner may have to be called on. When a solution fails it is probably as a result of failure on the part of child or parent to carry out instructions.

There are no reliable data to show that the overweight or obese child stores fat more readily than the child of normal weight. Some children do gain more weight than other children on the same diet. My approach to the solution of this problem was based on no direct psychotherapy to child and/or parent, but rather letting this explanation guide us in our observations. A distinct over-concern was noted in patients' and parents' attitude of talking too much about food. In most instances parents have tried to diet the patient without success. During treatment of the child it was emphasized that there were to be no restrictions or instructions as to type or quantity of food consumed at regular meals, and that food should be excluded from the day's conversation. The patient was to have no food between meals, and rigid care was employed in taking the precribed dose of medication. This allowed the child to have a completely free diet at regular mealtimes having his choice directed only by his own desires.

**Material and Method of Study**

This study consisted of 100 cases chosen from private practice, children ranging in age from 8 to 18 years. The average age was 12 years, 57 per cent were girls, 43 per cent boys.

Each of the 100 cases had precourse laboratory work-up consisting of a complete urinalysis, blood count, chest x-ray and basal metabolism studies. In addition 10 had x-ray studies of the skull and long bones. All of the laboratory findings were within normal limits, every patient within the euthyroid range.

In all cases the patient was supplied with antiobesity capsules and instructed to take one one hour prior to each regular meal —in special instances a fourth capsule in mid-afternoon. In those instances where school hours conflicted with taking the drug, the teachers were requested to allow the student to leave the classroom to take water with the capsule.

Each child was further instructed not to eat between regular meals; though permitted as many helpings of food as he or she desired during breakfast, lunch and dinner. Older patients who, on week-ends would have social affairs and dates, were instructed to take an additional capsule an hour before eating.

*Obolip®, each capsule contains choline bitrate 400 mg., *dl*-methionine 150 mg., vitamin B-12 U.S.P. 4 mcg., *d*-amphetamine sulfate mg., phenobarbital 16 mg., and methylcellulose 160 mg., Lakeside Laboratories, Inc., Milwaukee, Wis.

social functions.

o regular plan of re-examina- of the patients under study followed. After the institu- of therapy all of the cases e seen the first two or three es at weekly intervals. There- r the return visits were ir- ular depending on the nature the patient. We found that e of the patients needed fre- nt return visits to maintain r interest and cooperation, others less frequent visits e more efficacious. In the lat- group, greater weight loss ulted between examinations ause of the longer interval, ich gave them greater encour- ment upon the return visits. h child received a complete sical examination including ght and weight. The labora- work on return visits con- ed of hemoglobin determina- (Spencer Method) and uri- lsis.

No height and weight chart or ph was used as a guide for ermining the limit of desired ight loss. In the experience of investigators the appearance general physical condition the patient were considered best guide. Five patients were pped from our study because lack of interest and poor co- ration from the family. One ld was dropped because of chological problems.

During the study it was found that only with continuous progress in weight loss and removal of pressure from relatives and friends could the patient's cooperation and interest be maintained. This investigation was started as a double blind study, and as soon as the effective therapeutic agent was determined it would be discontinued.

The material was supplied labeled as capsules "A" and "B" the contents unknown to the observer. Patients were supplied capsules "A" and "B" in a random fashion—the first started on capsule "A" the second on capsule "B." They were observed for a period of one week. The effective therapeutic agent was recognized at the end of the first week when the first two patients returned. The first, a girl of 10, initial height 58 inches, weight 129 pounds, was given capsule "A" for one week and instructed to take them one hour before meals. Upon her return after one week of therapy her weight was 130 pounds. The second, girl of 15, height 61 inches, weight 144 pounds, was given capsule "B" and instructed to take one capsule one hour before each meal. Upon her return at the end of one week, her weight was 139 pounds.

It was apparent that capsule "B" was the therapeutic agent, capsule "A" the placebo. For further proof the patient initially

placed on capsule "A" with no resultant weight loss, was placed on capsule "B" with similar instructions. Upon her return after one week of therapy her weight had dropped from 130 to 123 pounds. Maintained on capsule "B," her weight continued to drop until she reached 119 pounds. The therapy was then discontinued.

Six additional patients were then given the placebo capsule in the double blind study for a period of two weeks with no resultant weight loss. When the real therapeutic agent was administered, all six patients started and continued to lose weight.

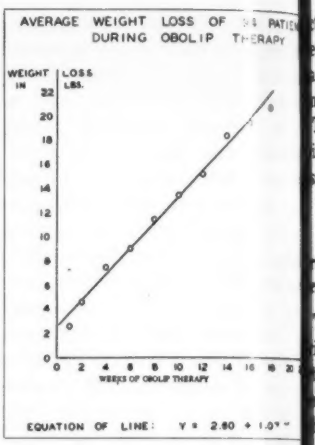



FIGURE 1

## Results

Of the 94 cases studied, the patients ages ranged from 8 to 18 years, the average 12 years. The initial weights of the patients ranged from 89 pounds to 214 pounds, the average 135 pounds. The total loss in weight by all 94 patients was 1844 pounds, the average loss 19.6 pounds (range: 2¼-40½ lbs.). The mean duration of therapy was 22 weeks (range: 1-10 months). The graph shows the average weight loss of 94 patients during the observation period.

## Summary

The problem of obesity in the pre teen-aged and teen-a child has long been one of g concern to patient, family, a physician. Although the phy cian is well aware that in majority of instances when child reaches puberty the pr lem disappears, because of parents' anxiety and particula the child's anxiety an eff should be made to reduce child's weight to a level that compatible with neatness a good appearance. To submit s a child to a rigorous diet, with without appetite depressants a metabolic stimulators, is not o futile but unwarranted.

The method presented in study is practical, logical and

tive. In this experience the thod has met with only the st resistance from patients and milies.

The preparation has helped to ng about a consistent weight s, without the necessity of a rigorous diet, in 94 patients, varying in age from 8 to 18 years.

No side effects were observed from the drug. Neither irritability, sleeplessness, nor anxiety was noted in the case of any patient.◀

## rtificial Kidney in enal Dysfunction

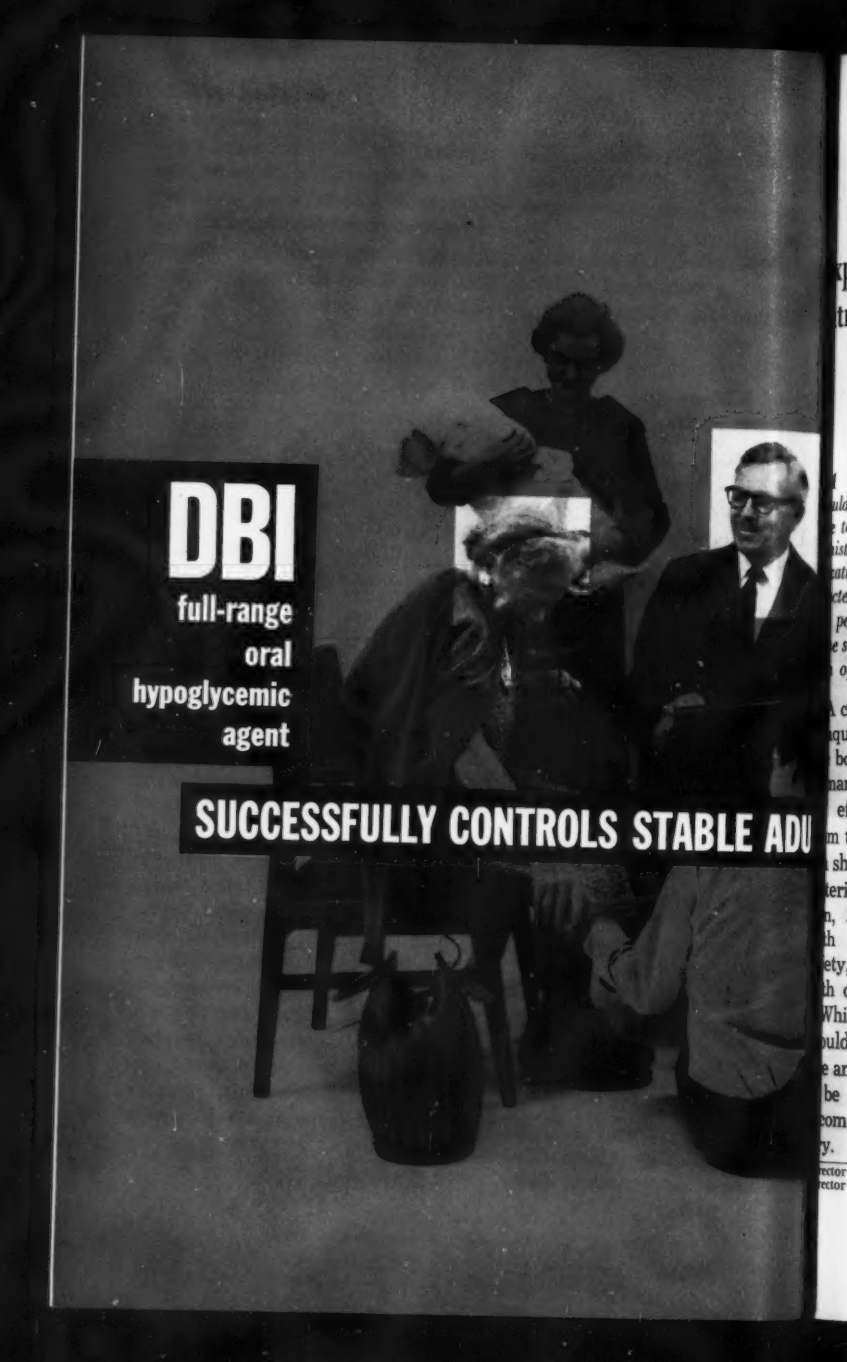
The artificial kidney serves imarily to correct the electroe imbalance resulting from nal dysfunction, imbalance of hich having extended beyond ssibility of correction by parteral fluids and medication. ertain types of artificial kidys may remove accumulated id in the body.

Simple dehydration as a cause the anuria must be disproved, g., the patient must be catherized and no accumulation of ine found in the bladder, and e catheter left in place so that ring treatment the urine outt can be accurately measured. e renal pelves should be catherized to exclude possibility urethral obstruction.

These conditions excluded, a mplete anaylsis of the blood ectrolytes, $CO_2$ combining pow-, calcium, phosphorus, urea trogen and creatinine, comete blood count and a hemacrit are essential. All of these udies must be repeated daily. The potassium (K) value, as it approaches 7 mEq. per liter, demands immediate use of hemodialysis. The electrolytes must be maintained near normal by oral or parenteral medication and fluids.

Dialysis is valueless in conditions of uncontrollable, fluctuating electrolytes, particularly in good or only moderately depressed urinary output. An anemia of less than 8 gm. of hemoglobin greatly increases the inherent risk of dialysis. This procedure at best is not the entire answer to the problem of renal dysfunction electrolyte imbalance, serving only as one of several therapeutic measures. It has little to offer the patient with chronic renal disease except possibly for ameliorating acute exacerbation. Although dialysis may balance the electrolytes prior to an operative procedure materially benefitting renal function, these situations will be rare.

Lich, R., Jr., & Barnes, M. L., *J. Kentucky M.A.*, 57:813-814,1959.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# xperience with Diatrizoate Sodium for travenous Pelography

LEONARD V. SMILEY, M.D.,* and
H. POSTER, M.D.,† *Bronx, New York*

*l radiopaque contrast medium uld be effective, efficacious, and to use. This compound was adistered following standard senation procedures to 1300 patients cted for pyelography. Less than per cent experienced side effects, e serious enough to warrant cessa- of the procedure.*◀

A critical evaluation of a radiqque medium introduced into body for diagnostic purposes nands consideration of both effectiveness and freedom m toxic reactions. Each medi should be tested against four teria: 1. effectiveness of acn, 2. comparison of efficacy h other similar agents, 3. ety, and 4. safety, compared h other media.

While the substance chosen uld, ideally, be the most effece and least toxic, this is rarely be achieved in practice, and compromise is usually necesy.

ector of Urology, Fordham Hospital.
ector of Radiology, Fordham Hospital.

Diatrizoate sodium* is one of the newer radiopaque agents which, in the opinion of several recent investigators,[1-4] most nearly meets these requirements as a urographic contrast medium. Since our experience supports their conclusions, a report on its use in intravenous pyelography seemed justified.

During the last four years, 1300 of 2300 intravenous urograms have been made using 50 per cent diatrizoate sodium, without one serious side effect, in patients ranging in age from four days to 95 years. A history of allergy did not preclude pyelographic examination, and a number of patients allergic to other radiopaques did not react adversely.

*Hypaque®, Winthrop Laboratories, New York.

1. Speicher, M. E., *Am. J. Roentgenol.*, 75: 865,1956.
2. Hinkel, C. L., & Funkhouser, G. R., *Bull. Geisinger Mem. Hosp. & Foss Clin.*, 8:149, 1956.
3. Kraft, E., & Slater, G. S., *Connecticut M.J.*, 20:437,1956.
4. McClure, R. F., *Radiology*, 69:101,1957.

### Procedure

The standard method of testing for sensitivity was followed. A test dose of 1 cc. 50 per cent diatrizoate sodium was mixed with 1 cc. of the antihistamine, chlorprophenpyridamine maleate and they were injected intravenously. The patient was observed for 20 minutes. During this period a flat plate was made. If no serious reaction occurred, a second injection of 1 cc. was given, this followed 30 seconds later by the rest of the 30 cc. dose injected in two minutes. X-ray pictures were taken at 5-, 10- and 15-minute intervals after completion of the injection. Delayed films were taken as necessary after examination of the initial x-rays.

### Side Effects

Each patient was carefully examined for pain at the injection site, and for referred pain, nausea, dizziness, syncope, urticaria, sneezing and shock. There was no pain at the site of injection except when extravasation occurred, this in a few instances only. In these cases the pain was mild and transient. Local treatment was unnecessary and complications did not develop. In eleven of the 1300 patients (less than 1%) mild nausea, dizziness or sneezing was noted, none of which was severe enough to warrant stopping the procedure. the reaction occurred in the servation period after the dose, the regular injection given in three, rather than usual two, minutes. No furt reaction was seen in any pati Shock or syncope was not served in the whole series. Bl pressure was measured be and immediately after com tion of injection in 200 conse tive cases. There was neve change of more than ten po in systolic or five points in d tolic pressure. These obse tions, considered together w our experience with other u graphic media, indicate that trizoate sodium is one of the est agents available for intra nous pyelography.

### Results

It is more difficult to evalu the effectiveness of radiopa agents since the renal collect system may be visualized by urographic media. Demons tion of pathologic lesions physiologic disturbances mands clear and sharply defi roentgenograms. This is esp ally true when a differen diagnosis to rule out invol ment of other organ system required. Diatrizoate sodium the advantage of very rapid cretion,[5] so that a qualitative

5. McChesney, E. W., & Hoppe, J. O., *Roentgenol.*, 78:137,1957.

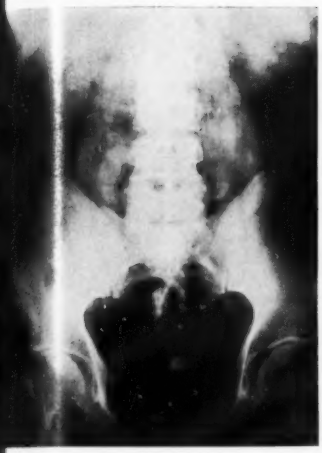

FIGURE 1

Flat plate prior to injection of the radiopaque medium

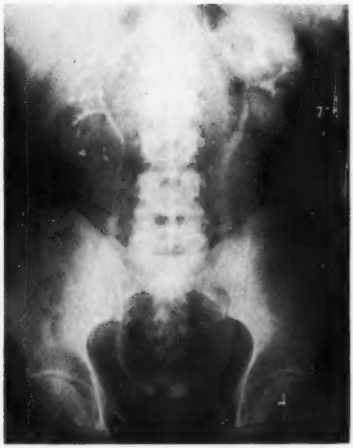

FIGURE 2

Pyelogram taken 5 minutes after injection of the radiopaque medium

essment of renal function can usually be made from the first late taken five minutes after injection. The presence of intrinsic enal pathology can thus be uickly determined. In this eries of patients, diatrizoate sodium has given diagnostic films f consistently high quality and as been particularly useful in emonstrating renal and ureterpathology or obstruction.

**Representative Case History**

The patient had complained of ild pain in the left inguinal reion for a period of three weeks. n the day before examination, ross hematuria developed and intravenous pyelography was performed. A calcific density in the area of the urinary bladder was revealed on the flat plate (Figure 1). Subsequent ureteropyelograms taken 5, 20 and 45 minutes after injection clearly showed the calculus in the area of the bladder. The calculus, however, is also directly in the lower end of the ureter and separated from the bladder by the ureteral wall (Figures 2, 3, 4). A diagnosis of calculus in a ureterocele was made which was confirmed at surgery.

**Summary and Conclusions**

Diatrizoate sodium (Hypaque)

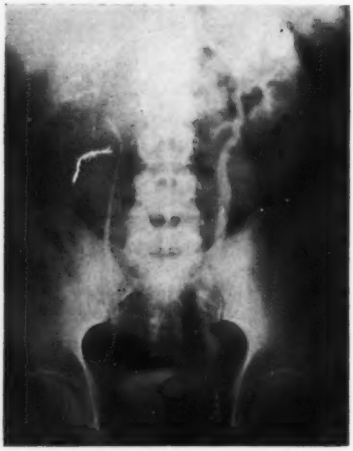

FIGURE 3

**Pyelogram taken 20 minutes after injection of the radiopaque medium**

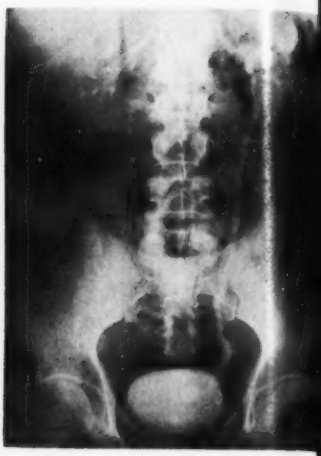

FIGURE 4

**Pyelogram taken 45 minutes after injection of the radiopaque medium**

has been used to perform intravenous pyelography in 1300 instances and found to be a safe urographic medium. In no case was the response to a test dose severe enough to justify discontinuation of the procedure. The incidence of side effects was less than 1 per cent. No serious reactions were observed.

The renal system was clearly outlined and pathologic conditions of the upper urinary tract were demonstrated.◀

# ome Comments on the Common Wart

ROY L. KILE, M.D., *Cincinnati, Ohio*

*The atypical appearance of some arts may make correct diagnosis fficult. Once diagnosis has been tablished, removal is often equally fficult. Two of the most effective thods of removal are fulguration d freezing with liquid nitrogen. e cause of this benign dermatosis still undiscovered.*◀

Probably no other skin tumor as misunderstood as is the mmon wart. It is a very in-resting virus disease about hich much folklore has devel-ed. Other types of papillomata articularly in animals are used by viruses that are differ-nt from those causing the hu-an wart. The latter are the me regardless of location on e body. Their variations in ap-earance are due to other fac-rs. There is still a great deal be done and a lot to be learned om a carefully planned investi-tion of the wart virus.

### Origin of Special Interest

Some years ago it became evi-nt that the communicability of arts was common knowledge.[1] Many letters received from athletic instructors, school teachers and others responsible for those exposed in showers, swimming pools, etc., reported "epidemics" of warts — particularly of the plantar type. The number of dermatologists well aware of this fact but still not sure if any remedial steps should be taken was surprising.

Since these experiences it has been a policy to ask every patient who has warts if he has been exposed to anyone with any type of these lesions. Although many do not know, in most instances there is knowledge as to whether other members of the family have such lesions. Surprisingly, it was found that 80 per cent of persons with warts report other members of their families with similar lesions. The incubation period of warts may be long, even up to 8 months. This and the fact that new lesions may appear some time after old ones have been removed is carefully explained to

1. Kile, R. L., *J.A.M.A.*, 162:1222-1224,1956.

all patients having warts. This keeps them from developing the false idea that they were improperly treated.

No area demonstrates the communicability of warts better than the scalp or beard. The trauma of shaving is a ready means of spreading the virus.

### Clinical Appearance

In spite of the fact that the appearance of warts is considered familiar, at times even the most astute dermatological clinician may be confused by it. The areas between the toes may present soft and boggy lesions and this infection thereby confused with a fungus infection.

Another area in which difficulty is encountered is about the nails. The lesions may not become very verrucous, but may rather form a plateau-like tumor about the sides of the nails, which at times extends in under the nail and lifts it from its bed. These lesions may be difficult to treat and at times painful.

### Susceptible Areas

Lesions on the genitalia, referred to as condylomata acuminata, are probably caused by the same virus.

The presence of discharges seem to predispose to the development and localization of these lesions; e.g., the lesions are much less common in males who hav been circumcised. While such le sions may occur on the shaft o the penis, they are more com mon on the glans and prepuce In the female they are more com mon during pregnancy and in th presence of discharges, and ma assume huge proportions to th size of a grapefruit. It is interes ing that podophyllin works effe tively on lesions of this typ whereas it is of little value i the treatment of warts elsewhe on the body. It must be use with caution anywhere.

### Treatment

The treatment of warts oft becomes a major and discoura ing problem. Probably one of th reasons for this is that most p tients feel it is "just a wart" an easily removed. A wart may b one of the most difficult growt to destroy. In certain individua apparently predisposed to the development they recur at t edges of lesions which have a parently been entirely destroye Because of the virus etiolog these lesions, wherever locate do not respond well to surgi excision. Some lesions on t bottom of the feet that have r sisted all other modes of therap have cleared following remov by surgical excision. Many oth lesions, after skin grafting a long hospital stays, promptly r

urred at the edge of the scar. or this reason surgical excision rarely recommended, though casionally it may be used for ery recalcitrant plantar lesions.

**Most Effective Measures**

The lesions may be destroyed fulguration or freezing using e of several techniques. Liquid trogen and oxygen are most ef- ctive for this purpose. The only cations where the fulguration ark is used to destroy warts are the beard or scalp, and occa- onally for filiform lesions. Con- ylomata acumunata, if small or olated, can also be fulgurated. uch a procedure is painful and ay leave a scar (particularly if e lesion is of any size) which ay be as bad as the original art. There is also the possibility keloid formation following lguration which never occurs ter freezing.

A number of physicians de- roy warts using caustics and at mes with good results. How- er, some fairly severe scarring s occurred and the procedure often unsuccessful. Its main commendations are that it is adily available and that it can used without any special uipment.

**X-ray Therapy**

Judicially used, x-ray therapy fers much in the management warts. It is a perfectly safe procedure if the lesion is blocked down carefully with lead and the treatment given only to the wart. In recent years there has been so much adverse criticism of the use of any type of radiation therapy that many persons have unfortunately developed a phobia of this modality. This therapy should not be employed if there is great reluctance on the part of the patient or family about its use. The main reason for this is that these individuals tend to blame any illness or difficulty they may develop on the x-ray therapy. With a cooperative patient, however, excellent results can be obtained, and quite safely.

**Amplification on a Favorite Method**

Freezing with the liquid oxygen or nitrogen has offered a great deal in the destruction of most of the lesions. It is now readily available in most cities, can be employed with safety, and produces little or no scarring and less pain than is caused by many other destructive procedures. Solid carbon dioxide is a little more readily available and has been used by many chiropodists to treat plantar warts. Considerable experience is required to arrive at just the degree of freezing to destroy the lesions properly. If not enough, the lesions promptly recur.

While many warts are very re-

sistant to treatment, some spontaneously regress. Further, some persons never have warts. It has been suggested that warts could be cured by hypnotism. These, plus a multitude of other factors attendant on the appearance and disappearance of verrucuous lesions, offer a fertile field for investigation.◀

---

**Effect of Niacin on Blood Cholesterol Levels**

The effectiveness of large doses of niacin in reducing the concentration of plasma cholesterol of patients with hypercholesterolemia was first noted accidentally in routine studies of blood chemistry being carried out on schizophrenic patients as experimental therapy. Well controlled studies have shown that lowered plasma cholesterol can be maintained for 3½ years on niacin in three divided doses totalling 1.5 to 6 gm. a day taken during or after each meal. In one series of patients with hypercholesterolemia, many resistant to other regimens, the mean reduction of plasma cholesterol was 17% during an extended period. A few patients with high plasma cholesterol values have been somewhat resistant.

Compared in the same patient, the effect of niacin seems to be greater than that of sitosterol and low-fat diets. It is equal to or greater than that of partial reduction of the dietary fats containing saturated fatty acids, with replacement by fats containing a large proportion of the polyunsaturated fatty acids. Although flushing of the face and fullness in the head are usual, somewhat more marked at the beginning of treatment with large doses of niacin than after smaller doses, these reactions tend to diminish or disappear as treatment is continued. A few patients have had to discontinue large doses because of nausea, vomiting, or urticaria. Large doses of niacin lower fatty acids in the plasma proportional to the cholesterol, and to a lesser degree decrease the phospholipids.

It is impossible at present to say whether long-term therapeutic reduction of hypercholesterolemia in humans will slow or arrest the development of atherosclerotic lesions, or cause their involution. An advantage of oral therapy with niacin is that it is followed much more consistently than are restrictive or alternate dietary regimens.

Barker, N. W., *Illinois M.J.*, 116:138-139,

# Pharmacology of Guanethidine, A New Synthetic Antihypertensive Agent

R. A. MAXWELL,* and A. J. PLUMMER,*
*Summit, New Jersey*

*The site of action of a new antihypertensive agent, guanethidine, is probably at the sympathetic nerve terminals where it acts to inhibit the transmission of sympathetic impulses to smooth muscle effector organs. It does not produce blurring of vision, constipation or impotency, but diarrhea was noted.*

Although in the past decade a number of potent drugs for the treatment of hypertension have been developed and marketed, it is still of interest in this field to seek new drugs with novel modes of action and hence potentially with different or wider spheres of clinical usefulness. Our work along these lines has resulted in the clinical testing of a compound called guanethidine** which is [2-(octahydro-1-azocinyl)-ethyl]-guanidine sulfate. The antihypertensive actions of this compound in laboratory animals have been striking[1] and early clinical reports support closely the pharmacologic findings.[2-4] These researchers have reported guanethidine to be potent with minimal side effects and a duration of action of several days.

## Results and Conclusions

In the laboratory, interest in guanethidine was aroused by the observation that it produced a marked and protracted relaxation of the nictitating membranes of dogs and cats. Since the innervation to these so-called third eyelids has only a sympathetic nerve component, their relaxation indicated a suppresant action somewhere in the sympathetic nervous system. Subsequent cardiovascular studies

*Research Department, Ciba Pharmaceutical Products, Inc.

**Ismelin®, Ciba Pharmaceutical Products Inc., Summit, New Jersey.

1. Maxwell, R. A., et al., *J. Pharmacol. & Exper. Therap.*, 128:22,1960.
2. Page, I. H., & Dustan, H. P., *J.A.M.A.*, 170:1265,1959.
3. Frohlich, E. D., & Freis, E. D., *M. Ann. Dist. Columbia*, 28:419,1959.
4. Richardson, D. W., & Wyso, E. M., *Virginia M. Month.*, 86:377,1959.

demonstrated that guanethidine had the capacity to block the powerful vasopressor actions elicited by carotid sinus reflexes, and to suppress the severe hypertension evoked by agents such as amphetamine and ephedrine. Furthermore, guanethidine produced profound and prolonged reduction of the arterial pressure in renal hypertensive dogs.

These data were interesting but did not tell us if we were dealing with something new. Many of the actions just described can be evoked by other well known antihypertensive agents, e.g., rauwolfia alkaloids, hydralazine, chlorpromazine, ganglionic blocking agents, and adrenergic blocking agents. The evidence concerning the mechanism of action of guanethidine and the inferences made from this evidence were as follows:

1. Since guanethidine produced marked relaxation of a smooth muscle effector, i.e., the nictitating membrane, it was apparent that a suppression of sympathetic function was occurring within one of three regions: the central nervous system, the efferent sympathetic nerves supplying the effector, or the smooth muscle effector itself. We dismissed the possibility of an action in afferent fibers since in the case of the nictitating membrane there are apparently no afferent nerves specifically i volved in maintaining the tone the membrane. By analogy w would then suspect that the pr mary cause of the antihyperte sive action of guanethidine w not due to an action on the a ferent endings of circulatory r flex arcs as is the case wi veratrum alkaloids.

2. Next we found that in t animal treated with guaneth dine, the nictitating membra could no longer be contracted stimulation of the preganglio portion of the efferent symp thetic nerve which constitutes motor supply. This result ind cated that guanethidine acti was somewhere in the effere sympathetic nerve or smoo muscle effector. The main acti of this drug was clearly pe pheral and not located in the ce tral nervous system.

3. The smooth muscle effect in the guanethidine-treated an mal was found to be responsiv to intravenously injected no epinephrine. Since norepi ephrine is the mediator sub stance released at sympathet nerve terminals it was reasone that the smooth muscle effect was still capable of respondi to nerve impulses. Therefo the suppressant action of gua ethidine had to be occurri somewhere within the effere sympathetic nerve. In oth words, guanethidine was not a

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ing like an adrenergic blocking agent such as phentolamine or phenoxybenzamine.

4. Finally, following guanethidine treatment, normal electrical potentials could be recorded from the postganglionic nerve during electrical stimulations of the preganglionic nerve. This indicated that conduction along the preganglionic nerve, across the ganglion, and down the postganglionic nerve was not blocked. This is positive evidence that guanethidine is not a ganglionic blocking agent. We are led to the conclusion that guanethidine produces its suppressant action on the most distal ramifications of the postganglionic nerves, i.e., at the postganglionic nerve terminals. This is a new and unique locus of action.

**Discussion**

Clinical investigations[2-4] to date have given strong support to the conception of a specific sympathetic blocking action for guanethidine. Guanethidine has been reported to have the clinical efficacy of ganglionic blocking agents, but clearly it does not produce side effects attributable to parasympathetic blockade, e.g., blurring of vision, constipation and impotency. Orthostatic hypotension has been linked with the therapeutic effect of guanethidine in some cases. The main side effect has been some moderate diarrhea, which is obviously not the result of parasympathetic blockade, but can well be explained by selective suppression of sympathetic inhibitory impulses to the intestinal tract.

The mechanism underlying the inhibition of sympathetic impulses by guanethidine is not completely understood. However, it has been demonstrated that guanethidine can reduce the levels of norepinephrine and epinephrine which are present in the arterial walls of animals. This depletion most likely represents a loss of transmitter stores from the sympathetic nerve endings which innervate the arteries. Such an action could readily account for the protracted and specific sympathetic blocking action of guanethidine.◀

5. Sheppard, H., & Zimmerman, J., *Pharmacol.*, 1:69,1959.

# Complete Transposition of Great Vessels with Interatrial Septal Defect and Pulmonary Stenosis

PAUL W. SANGER, M.D., *Charlotte, North Carolina*

*This procedure is recommended for the treatment of congenital heart disease when pulmonary blood flow is impaired, pulmonary vascular resistance is not elevated, and complete surgical repair cannot be performed because of anatomic reasons or because of the patient's age or general condition.*

A white boy of 11 was admitted because of retarded development and shortness of breath. He was severely cyanotic, and the fingers and toes were clubbed. The forceful apical impulse was in the left fifth interspace in the midclavian line. A weak systolic thrill was palpable over the whole precordium, and a systolic murmur audible. The murmur was also audible in the epigastrium, over the aortic arch and carotid arteries. The maximum point of auscultation was parasternally in the left second and third interspaces. The pulmonary second sound was decreased in intensity.

The ECG showed right-side heart strain. The hilar vessels showed moderate enlargement and the peripheral lung fields were avascular. On right heart catheterization the catheter passed an interatrial septal defect and was later introduced into the right ventricle but not into the pulmonary artery. Blood pressure in the right ventricle was 98/3 mm. Hg., the oxygen content of the blood samples suggesting a bidirectional (primarily right-to-left) shunt at atrial level and a bidirectional (primarily left-to-right) shunt at ventricular level. Following the heart catheterization, an angiocardiograph revealed a large interatrial communication, complete mixing of the blood in the ventricles, simultaneous filling of the retropositioned pulmonary artery, and the right-side aortic arch.

A thoracotomy was performed and an artificial heart-lung ma-

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hine held ready. Complete ansposition of the great ves- ls was revealed. The condi- on was considered inoperable d the chest was closed without rther attempts at correction. our to five months later cyano- s and dyspnea increased, at hich time vena cava-pulmo- ry anastomosis was decided on.

Under endotrachael, ether- ygen anesthesia, a right pos- rolateral thoracotomy was per- rmed in the bed of the re- cted fourth rib. The superior na cava and the azygos vein ere dissected free. The pres- res in the systemic venous stem were continuously moni- red by catheters inserted into e superior and inferior venae vae. The pulmonary artery as to the right and posterior the ascending aorta, pressure ing 16/7 mm. Hg. After free- g the right pulmonary artery, was ligated at its origin with e main trunk and cross-sec- oned distal to the ligature, the ripheral stump held by a awford vascular clamp. Simi- rly, the superior vena cava was ated at the right atrium and vered. Thereafter, an end-to- d anastomosis was done be- ween the distal stumps of these o vessels. Upon releasing the amps, the artery filled well rough the anastomosis, blood essure in the superior vena cava at the time of the occlusion rising from 17/8 to 58/50 mm. Hg., but falling to 21/19 mm. Hg. immediately after completion of the anastomosis. There was no change in the heart rhythm, systemic arterial blood pressure or that in the inferior vena cava. Cyanosis, having increased significantly during the occlusion of the superior vena cava, disappeared following the anastomosis. An intercostal tube was used to drain the right pleural cavity, as the thoracotomy wound was closed in layers.

The patient awakened immediately and had an uneventful postoperative course. The cyanosis did not return even after moderate physical exercise, and he was not dyspneic. The oxygen saturation of the systemic arterial blood rose from the preoperative 82%, to 93%. Angiocardiography on the fourteenth postoperative day showed a rapid filling of the right pulmonary vascular system from the superior vena cava through a wide open anastomosis. An ECG after surgery showed no right ventricular strain, the electric axis turning to the left.

The patient was discharged 14 days following surgery and has been followed closely since then. He has good color and no recurrent signs of cyanosis.◄

*J. Thoracic & Cardiovas. Surg.*, 38:166,1959.

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**References:** (1) Boland, E. W.: World-wide stracts 3:11, 1960. (2) Kolodny, A. L.: Dis. 11:64, 1960. (3) Talbott, J. H.: Rheumat. 2:182, 1959. (4) Burns, J. T. F.; Berger, L., and Gutman, A. B.: Med. 25:401, 1958. (5) Talbott, J. H.: & Joint Surg. 40-A:994, 1958. (6) Conn Carey, T. N.; Davis, T., and Levica, N.: Invest. 38:997, 1959.

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# one Pain in Essential Hyperlipemia

MARVIN L. WOLFF, M.D.,* *Memphis, Tennessee*

*The presence of this symptom in at is considered essentially a meta- lic imbalance has not previously en reported. The patient of the case el here exhibited the usual signs hyperlipemia without any accom- nying abnormal condition, as own by thorough laboratory ex- ination.*◀

The subject of essential hyper- emia has been thoroughly re- ewed.[1,2] My purpose here is point out, what insofar as I ow, is an undescribed symp- n in this condition, namely, ne pain. The following case ort presents this finding.

## Case Report

n June 15, 1957, a white man of referred by a dermatologist, came my office for medical evaluation cerning xanthomatous skin le- s. About 2 months previously he noticed yellowish papular erup- s on both knees. Soon there had eared similar lesions on his el- bows and on the nape of his neck. They were about 0.5 to 1 cm. in diameter, and become increasingly numerous. He had first noticed them at about the time his home had been destroyed by fire; whether or not his emotional upset at this event precipitated the eruption is not known. During the past 2 to 3 years he had had a great deal of tenderness and pain in various bony structures. His right index finger had become extremely sensitive to touch. A slight blow to any bone would produce excruciating pain. Even removing his glasses would frequently produce cranial pain. Stretching the tendons of his wrists and ankles caused much discomfort. He had had several episodes of sharp pain shooting up his spine to his head. However, at no time had he noticed any swollen, red, or tender joints.

In the past, he had had the usual childhood illnesses without consequence. During World War II he had served on active duty in the United States Army in China, India, and Burma, and had had malaria, amebic colitis, and amebic hepatitis. There had been recurrent attacks of malaria, but none in the past 10 years.

His family history revealed that his parents are living and well; he was one of 7 siblings and, except for one sister who died of "uremic poisoning" during the terminal stages of a pregnancy, all his brothers and sisters are well. All are heavy. There is no knowledge of a hyperlipemic condition in any relative.

The system review was unremark-

om the Department of Medicine, Univer- of Tennessee College of Medicine, Mem- s, Tenn.

Thannhauser, S. J., Lipidoses: Diseases of ne Cellular Lipid Metabolism. *In* The Oxford Medicine, ed. H. A. Christian, vol. V, Chap. VII-A, pp. 214(3)-214(595), Oxford University Press, New York, 1949.

Thannhauser, S. J., Lipidoses, Grune and Stratton, New York, 1958.

able except for occasional intolerance to fatty and greasy foods. The patient had never experienced any episodes of abdominal pain.

Physical examination showed a moderately obese man. He was 180.3 cm. tall (5′ 11″) and weighed 112.5 kg. (248 lbs.). Small, papular, yellowish, xanthomatous lesions were present on the neck, knees, thighs, and elbows. The blood pressure was 130/96; the pulse was normal. The eyegrounds appeared normal. There was tenderness to slight pressure and tapping of all bones of the extremities and the skull. The right index finger was particularly sensitive to touch. On extension of the left thumb a nodular mass was felt upon its dorsal surface overlying the metacarpal bone; this was probably a xanthoma of the extensor pollicis longus tendon. The remainder of the examination was unremarkable.

The following laboratory data were obtained in the Baptist Memorial Hospital, Memphis. The VDRL study, the peripheral blood, and urinalysis were normal. The serum cholesterol was 730 mg. per 100 ml. (normal 160-270 mg. per 100 ml.) and the total lipids were 4,415 mg. per 100 ml. (normal 450-850 mg. per 100 ml.). A glucose tolerance test was slightly elevated. An electrocardiogram was normal. X-ray studies of the chest, skull, long bones, and pelvis were negative.

The patient's serum appeared milky. When informed of this, he remembered being told the same thing 12 years previously when blood was drawn for a routine premarital serologic examination.

On the basis of the skin lesions, the milky serum, the elevated serum lipids, and the absence of any other abnormal condition, a diagnosis of essential hyperlipemia was made. The abnormal glucose tolerance curve was thought to be an associated finding rather than a cause of the hyperlipemia.

The patient was placed on a low fat diet. Within one month he lost 11.3 kg. (25 lbs.) in weight, the skin lesions regressed remarkably, t nodular mass on the thumb was longer present, and the bone p disappeared completely. Three mon later he had lost 11.3 more kg. lbs.) in weight, the skin lesions w no longer discernible, and it was i possible to elicit any bone tenderne The total serum lipids had fallen 2,210 mg. per 100 ml. Daily Clinite of the urine were negative. Gene ally, he felt very well.

In October, 1958, the patient w treated in the Baptist Memorial He pital, Memphis, for an acute pleuri which responded promptly to co servative measures. At this time, fu ther laboratory studies were ma with the following results. The ser again appeared milky. The total ser lipids were 1700 mg. per 100 ml., a the serum cholesterol was 207 m per 100 ml., with 95% esters. T persistence of the milky serum a elevated total lipids while the ser cholesterol returned to normal characteristic of essential hyperlip mia. Various liver function tests w normal, although the liver at this ti was palpable about 2 fingerbreadt below the right costal margin. T liver enlargement had not been d tectable prior to the patient's wei loss of some 22.7 kg. (50 lbs.). A fa ing blood sugar was 95 mg. per ml., and the serum amylase was mg. per 100 ml. X-ray studies of chest, gallbladder, and entire int tinal tract were negative. An el trocardiogram was normal. Stool e aminations and proctosigmoidosc were normal.

At present (May 15, 1959) the p tient continues well and free of a symptoms of essential hyperlipem

## Comment

Recently, some writers[3,4] ha suggested the use of heparin cases of essential hyperlipem

3. Lever, W. F., et al., *A.M.A. Arch. Der* 71:150,1955.

4. Lever, W. F., et al., *A.M.A. Arch. Der* 71:158,1955.

ut this patient responded
romptly to diet alone.

The unusual symptom of bone
ain in association with essen-
al hyperlipemia is noteworthy.
here must be a direct connec-
on between the patient's meta-
bolic disorder and his bone pain, because both the bone pain and the skin lesions disappeared dramatically with diet and weight loss. No explanation is offered, but speculation is invited.◀

*J. Tennessee M.A.*, 52:483-484,1959.

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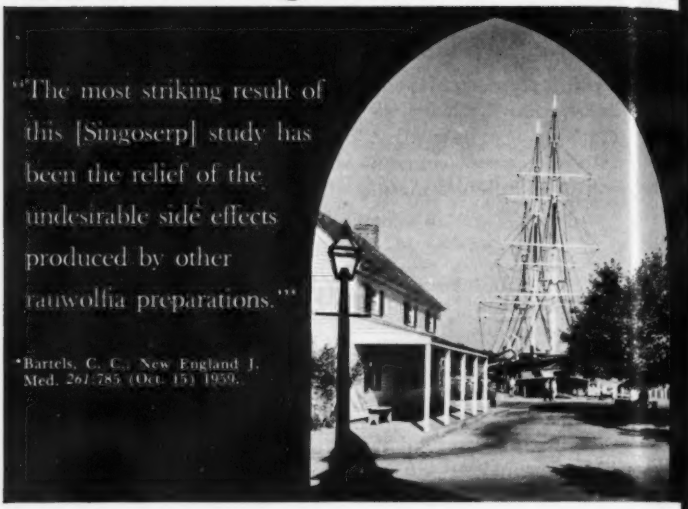
**ong-Term Prognosis ollowing Myocardial nfarction**

Most of those recovering from yocardial infarction live in fear relapse. Some never return to ctive life and consider themelves as invalids. In a clinical nd ECG study made 8 months 18 years after the acute epide among 180 persons having ad myocardial infarction, 152 of e patients were men and 28 omen, aged 30 to 80. The inrct was severe in 67 instances 37%) and of first degree in 113 62%). Fifty-nine were treated home and 121 in the hospital, here they remained for an verage of 43 days. Anticoagunts were given to 90 for an verage of 32 days. Patients aving died in the first 24 hours fter the infarct were excluded om the series. The infarct was nterior in 40%, posterior in 5%, and antero-lateral in 15%. f the 127 followed-up and xamined after recovery from e infarct, 21 died. Death, immediate or late, occurred in 28.7% of the patients. Of the 21 late deaths, 9 were in the first, 8 in the second year. Of those surviving, 73.5% were in good health, 46.2% had returned to former activities, 27.3% are now in good health but on a reduced work schedule, and 26.5% have various conditions (12.5% angina pectoris and 11% decompensation). Among those with severe infarction having anticoagulants during the acute phase, 48% apparently had complete clinical recovery and 32% persistence of various disturbances. Among those of the same group not having anticoagulants, 38% had recovered and 44% showed cardiac disturbances. The ECG showed partial or complete regression of alterations in 69% of the patients having returned to normal health.

Bregani, P., et al., *Minerva med.*, 50:2343-2348, 1959.

## from the New England Journal of Medicine

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# ir Pollution and Health

ALVAN L. BARACH, M.D., *New York, New York*

*The main cause of air pollution is lation of fuels. Atmospheric con- ions may hamper ventilation of a , causing mucosal irritation and piratory distress among its popu- ion. Methods must be developed improve combustion and reduce persion of irritating by-products industrial areas.*◀

The ventilation limit of many ties (their ability to dispose rmlessly of poisonous gases, ot particles, and fly ash into e upper atmosphere) has al- ady been approached. Every w power plant, smoke-stack, finery, home furnace, incinera- r, automobile, bus or truck ds to the burden. It is estimat- that the cost of air pollution the citizens of the City of New ork is $12 per person per year. he effects of air pollution on uman health range from dis- mfort, depression, and irrita- on of the eyes and throat, to loss workdays, bronchospasm, ronic illness, and death.

## Sources of Air Pollution

The chief source of air pollution is the burning of fuels of all kinds. Most of the time (when the weather is favorable) the resulting air pollution does not exceed the tolerance level. Only the interference of the weather, e.g., low pressure areas or periods of inversion (a warm blanket of air above a colder one), is required to precipitate crises. One of these crises was a fog in London in 1952 lasting five days, during which period some 4,000 deaths occurred. Smog in Los Angeles was responsible for 281 excess deaths from cardiac and respiratory diseases in the last 137 days of 1953, and for 334 such deaths in 1954. The adults in one out of eight Los Angeles households reported that they were considering a change of residence because of air pollution.

In 1948 a smog which settled over Donora, Pennsylvania, for four days caused respiratory symptoms, pain in the abdomen, severe headache, vomiting and some coughing up of blood. Of the population of Donora, 42.7%

or 13,000 persons, were affected in some degree by the smog and 20 deaths occurred. The survivors of the affected group were shown to have more current and chronic illness than those not affected, being particularly prone to heart disease, asthma, and bronchitis.

In Great Britain, investigators have demonstrated that incidence and mortality from chronic bronchitis are higher in urban communities than in rural areas.

A report of a study in Cincinnati stated that exposure to motor exhaust fumes and general urban air pollution greatly increased the hazard of lung cancer in smokers.

In 1953, it was shown that the sensory threshold caused breathing to become shallower and more rapid, pulse rate to increase, and tidal volume to decrease, in normal subjects. The principal villain is sulfur dioxide, a by-product of combustion of industrial and domestic fuels, of petroleum refining, and of incineration of garbage. Held in the soft, spongy particles of soot, it is readily oxidized into dilute sulfurous and sulfuric acid. Hydrocarbons present in exhaust fumes from motor vehicles, when acted on by sunlight in the presence of nitrogen oxides which are also released in the processes of combustion, produce ozone and other oxidation produc which even in low concentrati may cause the cracking of ru ber and paint, and may be to to plants and human beings.

Evidence from varied repu able sources here and abro links the increase in death ra from lung cancer among urb males to the pollutant material the air of cities. The most rece contaminants of the atmosphe those arising from the use of n clear energy, may menace survival of the human species.

### Solution of the Problem

The primary attack upon pollution lies in the developme of chemical and engineeri methods to improve combusti and reduce the particulates stack gases, fly ash, and mo exhaust gases. Meanwhile, g ernment regulation and enfor ment, and a vigorous campai to enlist public support and u derstanding can help to preve pollution. The similarity of t effects of the London smog 1952 to a mild gas attack led the use of simple masks or res rators. Remaining indoors a inactive was helpful to older pe ple, especially to those wi bronchitis, asthma, and cor ary artery disease. Certain p tients were advised to use carb filters in air conditioners masks in sickrooms; others us

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*References:*
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2. Lubowe, I. I.: Antibiotic Med. & Clin. Therapy 4:81, 1957.
3. Murphy, J. C.: Rocky Mountain M. J. 55:53 (June), 1958. 4. Pace, B. F: M. Rec. & Ann. 51:370, 1957.

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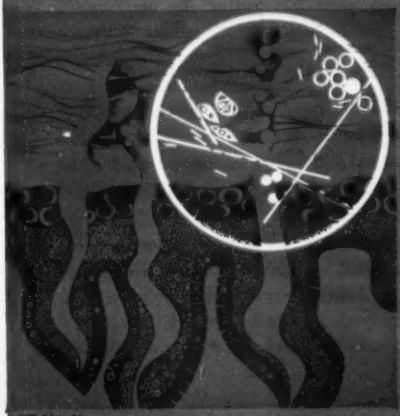
Geigy



ST-H2-60

wet sacking over window openings. It has been suggested that dust from cement works may be protective against atmospheric pollutants, this based on a report that in the cement district the incidence of lung cancer was markedly lower than that in nearby Greater London. Another report is that dispersion of ammonia in the chamber after subjects have been exposed to acid mists reduced both irritation and broncho-constriction. Magnesium oxide was equally effective. The Surgeon General of the Public Health Service has stated that investigators are finding a definite association between community air pollution and high mortality rates *via* cancer of the respiratory tract.

The toll of death when the polluted air of industrial communities is concentrated by natu al phenomena constitutes a pla and simple warning of what c occur. Evidence is also mountin of the deleterious effects of da to-day exposure to lower conce trations. Continued exposure air pollutants has been repeate ly linked with the increasing u ban incidence rates of bronchi and other lung diseases, inclu ing lung cancer.

Sulfur dioxide and other ir tants in the air are poorly tole ated, particularly by the elde and those who already suff from some form of respiratory cardiac disorder.

In spite of what is being do the trend toward air pollution still upward as industrializati and population increase.◀

*Bull. New York Acad. Med.*, 35:493-510,1959

---

**Congenital Hernia or Prolapse of the Diaphragm in Children**

The possibility of congenital deformities of the diaphragm should be considered in all cyanotic and dyspneic infants. Data on 24 such children observed at a surgical clinic showed that all but one was treated surgically. The age range was 1 day to 13 years. Four died, 2 within 4 hours of respiratory insufficiency caused by pulmonary hypoplas (in one brain damage by anox mia may have contributed The third child died of pne monia a month after operati the fourth 6 weeks after oper tion during an acute relapse. T 9 children having adequate f low-up were free from relaps

Konrad, R. M., & Fahmy, A. R., *Arch. Chir.*, 291:253-270,1959.

# anagement of Asthma: The Patient's Role nd Responsibility

LOUIS E. PRICKMAN, M.D.,* *Rochester, Minnesota*

*From the outset the patient must impressed with the fact that he st avoid anything which will irri- e the air passages. Precipitant fac- rs are smoking, hard laughing, tem- rature change, and sudden exer- n. Attempts should be made to as- rtain what odors, fumes, and sub- nces aggravate bronchospasm.*◀

The patient must understand at asthma is the result of in- mmation in the air passages the chest. Coughing from any use irritates the air passages, creases inflammation, and pre- pitates bronchospasm and at- cks of asthma.

### Smoking Interdicted

No patient with asthma should oke anything, at any time, in y amount. Medicated smoke y temporarily relieve bron- ospasm, only to cause smoke onchitis. Odors and fumes ch as those from furnaces, emicals, detergents, solvents, d smog induce coughing and asthma. Such exposure may necessitate a change of work or a move to a different environment.

### Avoidance Generally Preferable to Hyposensitization

If history and survey indicate that the asthma is caused by a specific substance, e.g., dander, or dust of grain or hay, it is better that the patient avoid the allergen than be hyposensitized by repeated doses of it. The same applies to cat hair, cow dander, and pollens. The patient can keep free of pollen by seasonal change of environment or by having a pollen filter in his bedroom window, in his place of business, and even in his car. Immunization is warranted if the above measures are not practicable. In pollen asthma, hyposensitization is highly successful.

Many patients with asthma react positively to "house dust" in skin tests and are subjected to long-term treatment with house-

ayo Clinic and Mayo Foundation

dust antigen—treatment seriously to be questioned on several grounds. It is the responsibility of the patient to search everything in his environment for sources of dust that consistently cause any of these symptoms, to avoid the sources and, when possible, to remove them.

**No Hard Coughing or Laughing**

Any exertion, even hard laughing, causes coughing and induces asthma. Walking from a warm room into cold, or windy air, or suddenly from cold air into warm air, will induce coughing and asthma. "Asthma pillow," a device that fits the palm of the hand and is held over the nose and mouth when going out in the cold, even to pick up the newspaper or a bottle of milk prevents many attacks. The patient can prevent many colds, and therefore asthmatic attacks, by keeping warm and dry, getting plenty of rest and avoiding persons who have respiratory infections. The simple, inexpensive mask so essential in the operating room and nursery has been neglected by patients and physicians.

**Limitations of Climatotherapy**

There is no ideal climate for the asthmatic. Respiratory infections occur in southern regions and even on southern deserts. All precautions necessary in the north must be taken in t
south also. An ideal place o
winter may be objectionable t
next.

**Therapeutic Measures**

When the asthmatic patie
has a cold, virus infection, flu,
coryza, he must go to bed i
mediately. Only in this way c
he hope to avoid the bronchit
coughing, and asthma that m
persist for weeks or monti
once they are both well start
and neglected. Antibiotics, an
histaminics, vaccines, and vi
mins are completely undepen
able in the prevention and tre
ment of colds.

Patients should be told th
mucus is normal, that it protec
its parent surfaces against re
piratory irritants, and is an oi
ment for inflamed bronchial a
tracheal membranes. Muc
should be left in place to p
form its functions. Patients ne
to be reminded that the mo
mucus they cough up, the mo
will be secreted. The membran
will not be left long without
protective coating. It helps t
patient to be told that any e
cess secretions are slowly rais
to the top of the treachea wh
they signal the patient to op
his mouth and gently clear
throat, expelling excess sec
tions that have not been allow
to become thick and tenacio
To keep the secretions thin,

# ACUTE CYSTITIS, URETHRITIS

## Respond Rapidly to Antiseptic, Soothing

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**SIMPLE, ACUTE** or isolated infections of the urinary tract readily yield to the antibacterial-spasmolytic actions of URISED.

Clinical reports indicate that acute cystitis or urethritis symptoms vanish within three days . . . urine clears within five to ten days.

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URISED controls pain while normalizing urination and producing antisepsis. Each URISED tablet contains: atropine sulfate 1/2000 gr., hyoscyamine 1/2000 gr., gelsemium, methenamine, methylene blue, benzoic acid, salol.

URISED is indicated in all simple urinary tract infections and in chronics as well. For generous starter prescription supplies for many patients just send this coupon!

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good rule to follow is to drink a glass of water each waking hour. Iodides, ammonium chloride, or other expectorants are ineffectual if the patient is dehydrated. Swallowing mucus is a harmless, physiologic procedure. The patient should be impressed with the need to treat his air passages as gently as he would his eye.

Nebulized bronchodilators should be used at the first sensation of tightness in the chest. They should never be depended on if asthma is severe, or if the chest is very tight. All patients with asthma must be taught how to cope with an attack, immediately and without help. Each one should be taught to take small doses of epinephrine, by inhalation or subcutaneous injection of 3 or 4 minims of a 1:1000 dilution, early in an attack of bronchospasm. This usually will stop the attack at once without unpleasant side effects. Such small doses usually may be repeated in 20 to 30 minutes. Patients should be reminded that epinephrine is a normal product of the body and not a noxious, habit-forming drug.

If a recurrent attack has not been neglected too long, a few days in bed in a hospital with supportive and symptomatic treatment usually permit the bronchitis to subside, and t
asthmatic symptoms to dis
pear. Asthma will not recur
the patient does not encoun
a bronchial irritant. Many p
tients learn how to avoid respi
tory irritants, and these are t
patients who are cured of as
ma.

**Practical Difficulties**

These include:

1. The patient may be unw
ing to give up pets.

2. Many times it is not e
nomically feasible for a pati
to follow a recommended p
gram.

3. Some persons are bothe
by dust or danders to which t
must daily expose themselve
their work.

**Division of Responsibility**

When asthma is finally
lieved, the relief usually resu
from combined efforts of a
operative patient and a num
of physicians. It is prefera
that an internist well versed
allergy serve as captain of
team. Patients must assume
sponsibility for carrying ou
program designed to avoid
spiratory irritants, to reli
symptoms of asthma early
adequately, and to help nat
heal the inflamed air passages

*South Dakota J. Med. & Pharm.*, 12:42
1959.

# Nonsurgical Treatment of Convergent Strabismus

ROBERT L. TOUR, M.D., *San Francisco, California*

*Among the various nonsurgical modalities described for the treatment of convergent strabismus are psychotherapy, total or partial occlusion of the better or fixating eye, orthoptic exercise, and the various cycloplegic and miotic pharmacologic agents such as atropine, pilocarpine, and isoflurophate.*◀

Although the effect of periods of emotional unrest upon position of the visual axes is well recognized, this influence is frequently disregarded in an attempt to reduce the problem to its simplest form and thereby better the chances of a permanent cure. This may act adversely in certain patients inasmuch as surgical treatment, *per se*, may have much psychotherapeutic value and the danger of overcorrection is therefore great. Conservatism is to be advocated in case of a large functional factor.

Total or partial occlusion of the better, or fixating, eye is employed in an effort to improve vision in the deviating eye. Full correction of astigmia and myopia should be ordered at the outset. In the case of myopia, no harm and often some benefit will accrue from the elimination of minus power for close work. In dealing with hyperopia, correction is not directed to acuity, but to the elimination of the accommodative component of the "near reflex." Full hyperopic correction provides maximal visual acuity with minimal accommodative stimulus. The less the accommodative effort the less the convergence, while the less the convergence the less the tendency toward esotropia.

Not all cases of esotropia are due to uncorrected hyperopia. In a given case orthophoria at distance could be brought about by means of glasses single binocular vision at near might be expected provided that both fusion and the AC/A ratio were relatively normal. Should the AC/A ratio be such that much

more than average convergence is produced by a given amount of accommodation, the result may be esotropia for near in the face of orthophoria for distance. In such a situation, bifocal lenses are of value because while they do not alter the basic AC/A ratio, they reduce its effect upon the ultimate relative position of the visual axes. Undercorrection of the deviation in order to stimulate fusional amplitude in the divergent direction (which in turn lessens the degree of esotropia) has been stressed.

**Sensory Treatment**

Orthoptic exercise consists of active binocular stimulation of corresponding retinal elements. The first step is to eliminate anomalous retinal correspondence, quite difficult if the angle of anomaly is small. Next, an attempt is made to overcome suppression of image, the purpose being to reestablish patient awareness of any abnormal deviation between the visual axes. Finally, attention is given to improvement of fusional amplitudes so that comfortable binocular vision that records a single image can be maintained in the face of rather wide fluctuations in relative visual direction. The premises of the treatment are:

1. Equal acuity in the two eyes is paramount in the establishment of single binocular vision.

2. Defective vision in the deviating eye is most commonly the result of eccentric fixation.

3. Occlusion of the fixating eye reinforces eccentric fixation in the other, so that visual acuity fails to improve and further therapy is more difficult.

4. Eccentric fixation can be converted to foveal fixation through adequate training. This is based on foveal recognition and visual-manual coordination.

The instruments used are designed to diagnose eccentric fixation, temporarily blind the parafoveal area and stimulate the fovea. In addition, there are devices intended to coordinate the eye, the cortex and the hand.

The visuscope is essentially a conventional ophthalmoscope with low illumination. The euthyscope is also a modified ophthalmoscope, but with a high level of illumination, designed to project a cone of light of 30° on the retina, but leaving a central zone of 3 to 5° illuminated. The coordinator makes use of the phenomenon of "Haidinger brushes," observed only when foveal fixation is being employed and hence are a valuable factor in foveal retraining. The results ascribed to pleoptic training appear quite impressive. In a series of 50 reported cases, improvement to 20/20 vision occurred in almost 80%. Before treatment

ion ranged from 20/60 to less an 20/400, and in all except 8 es occlusion of the unaffected e had been carried out with t measurable improvement in sual acuity.

**Pharmacologic Treatment**

Both cycloplegics and miotics ve been used in the treatment esotropia, however paradoxi- it may seem that drugs so posite in action could both ac- mplish the same result, i.e., duction in the degree of devia- n. The use of atropine is prob- ly best reserved for cases in ich occlusion is desired but nnot be maintained by me- anical means. Particularly in gh degrees of hyperopia, atro- ne affords effective physiologic clusion.

The more recent stimulus ward the use of miotics has en largely provided by one investigator who described the use of pilocarpine in a series of 44 cases of comitant esotropia, with beneficial results in 80%. He also suggested the use of miotics in unilateral high hyperopia, in order to equalize vision without producing aniseikonia. He also reported on 88 additional cases treated in this manner. It was emphasized that treatment should be continued until the age of 8, at which time the fusion faculty had matured. Permanent cure may frequently be achieved after divergence amplitudes have sufficiently improved. At present, the use of miotics forms an integral part of the nonsurgical treatment of accommodative esotropia. Insoflurophate (Floropryl) is now the drug of choice rather than pilocarpine because of the longer duration of effect.◀

*California Med.*, 90:429-432,1959.

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**romboembolism of Lungs**

The incidence of this condition mains high despite vein liga- n and anticoagulant treat- ent. Clinical manifestations are t to be suggestive, roentgeno- aphy or angiocardiography be- decisive in many (perhaps ost) cases. The condition is not cessarily fatal and is prone to use development of either ute or chronic cor pulmonale.

In thromboembolism leading to infarction, the infarcts are wedge-shaped but form a characteristic truncated cone. Smaller infarcts may be cuboid or meniscus-like. The base of the embolic infarct is sometimes the interlobar fissure line, along which it forms a parabolic shadow best seen on a lateral roentgenogram.

Arendt, J., & Rosenberg, M., *Am. J. Roentgenol.*, 81:245-254,1959.

**NOW**... the first truly effective and saf
control of both **chronic** and acute **diarrhe**

# Sorboque

(polycarbophil - thihexinol methylbromide)

**IN CONVENIENT TABLET FORM**

**A totally new agent, for non-opiate control of the dual proble of diarrhea: too fluid feces, too frequent evacuations**

**Unexcelled therapeutic response, 85% the chronic cases, 93% of the acute.**[14]

**The culmination of a decade of laboratory experimentation and over fi years of clinical confirmation.**

**For too fluid feces, an extraordinary ability to absorb free fecal water.**

**For too frequent evacuations, superio yet selective, antimotility action.**

**Convenient tablet form; simple, uncon plicated dosage schedule (1 tablet q.i.**

# urgical Replacement of the Breast

SIR HAROLD GILLIES, F.R.C.S., *London, England*

*Considerable psychic trauma can avoided and optimal cosmetic re- achieved if surgical replacement the breast in mastectomized pa- nts is done as soon as possible fol- ing mastectomy. Current prosthet- techniques permit instillation of first phase of a breast prosthesis ring the mastectomy operation.*◀

Reconstruction of the mam- ary prominence is indicated af- local or radical removal, after rophy following radiation, or hen the gland has failed to de- lop. It is difficult to appreciate e amount of psychologic trau- a such a loss entails on the out- k of the woman. The patient more often concerned with r deformity (which she feels ould be remediable) than with e chances of recurrence of ma- gnancy.

### chievement of Good Cosmetic Result

The extra safety from recur- nce that a properly planned astic operation will give has gument in favor. By the im- antation of new skin there en- es relief of skin tension along the line of the excision scar, and a mobile skin and fat covering in its place. It may be that the tight, atrophic, somewhat bloodless skin following some excisions is more prone to a cancerous degeneration than a well-nourished and freely mobile cover. Many patients complain of pain in the scar and of limitation of movement.

When the defect to be covered is large and deep, as following radiation necrosis, the whole sound breast may be rotated over the area. But for conditions less urgent such rotations are contraindicated as being inadequate and destructive. Large abdominal flaps are carried up by attachment to the forearm and other large abdominal flaps are used. These have the merit of introducing new tissues from a distance. In 1920 a tube pedicle was advocated to carry up a slice of skin and fat from the buttock to make a breast. There remains the tube pedicle formed to carry the circum-umbilical skin and fat. Given the necessary time, a

natural-looking breast, soft, warm and complete with make-believe nipple, can confidently be proffered.

**Immediate Removal Expedient**

The question may arise as whether to wait three weeks while the prosthesis is being prepared before performing the surgery. This interval is reducible to one week by improvement in technique and by the experience that would follow its wider employment. Either a deep tissue pedicle or, more certainly, attachment of the flap to the opposite wrist of the patient might prove a satisfactory boost to the blood supply. Either of these procedures would allow the pedicle breast flap to be moved with safety after the lapse of only one week.

The breast can be removed and the pedicle prepared at the same operation for implant three or four weeks later. If the new breast is implanted in the third week after the x-ray treatment, there might be some mild inflammation along the suture line, but this would be no contra-indication to the implantation of a healthy flap over the area or to its ultimate success. If further x-ray treatment is required it can be given through the new breast with more safety than over the scar. The recurrence rate may possibly be reduced by the treatment advocated, a even if a patient has only a year expectation of life, that is long time. Many will have mu longer to live and be thank for a replacement of breast.

Greater experience in ma mary reconstruction and furth team co-operation should lead a considerable improvement technique. At the moment t idea is that the patient shou leave the operating table af mastectomy with the first sta of her new breast in place or the making. She will never kn the horror of asymmetry a will be buoyed up with the p sence of a new mammary pro inence. She will then gladly su mit at a later date to the rou ing off and the finishing of t plastic design.

If the start of the repair is d layed, inertia supervenes, thought of more surgery is u welcome and the chance to h may be gone. Sullen acqui cence comes into the pict which the wearing of a "fals does little to abate. Having the "breast" safely in positi there are various minor man vers that will add to its norm appearance. The pedicle stu should be denuded of some its skin and the fat content fil in to raise the contour here there. The areola if necess may be simulated by graft free whole thickness skin fr

hind the ear, by using the ucous membrane of the buccal cavity. A part-thickness graft y also be taken from the opposite normal areola or from the bia minora. The umbilical hollow, if in good position, may be undermined and projected by implant of cartilage or a plastic prop to simulate the prominent nipple.◀

*Proc. Royal Soc. Med.*, 52:597-602,1959.

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## reditary Hemorrhagic eases

The commonly held concepts hemostasis need re-evaluation. e view that the fibrin clot rves as a mechanical seal and at the speed with which it is med is significant in hemostas- is not only unsound but is al- hampering progress. Perhaps much attention is being giv- to so-called accelerators and hibitors. One must not over- k the possibility that the first ges of hemostasis are carried by the vessel itself. Even in ere hyperheparinemia when formation of thrombin is al- st completely suppressed, mostasis is remarkably effec- e and breaks down only when injury is very severe. The neration of thrombin and the rmation of a fibrin clot may rhaps function only as third- e measures of defense against cessive loss of blood. It is not probable that some of the cognized clotting factors may have as their primary function the maintenance of the integrity of the vessel and its normal function. Thus, in acute thrombocytopenic purpura the bleeding is essentially angiostaxic in type. The clotting time in this disease is never prolonged and often is shorter than normal.

The development of the newer clotting tests has made it possible to diagnose and classify satisfactorily the hereditary hemorrhagic diseases. Their treatment, however, has not reached such a successful stage, because the mechanism of hemostasis is still imperfectly understood. To obtain the required information to solve the enigma of stanching, the hemorrhagic diseases themselves may serve as the most promising source. When sufficient data have been gathered it may be necessary to drastically revise present concepts.

Quick, A. J., *Brit. M.J.*, 1:1059-1062,1959.

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Unless your practice is limi
bacteriology . . . or your pa
are all in the upper in
brackets . . . you have doubtl
ceived complaints about th
of the medication you pres

# what your patie

# ives...and gets

e of these complaints can probably be dismissed lightly as ng from cranks, who would complain about your fee for a ight house call to save the life of a dying child. Others, how- are made seriously by thoughtful patients and deserve an er in kind. You know what the patient gets from his phar- st because you have prescribed it. Do you also know that verage cost of a prescription is about $3.00? Only about one o costs $10.00 or more, and 3 out of 5 of the prescriptions nder $3.00. These figures are based on retail prices. They de the manufacturer's research, development, and manu- ring costs and all distribution costs of the wholesale and the druggist. Only you and your patients can judge whether 's drugs at these prices represent a fair *quid pro quo,* an able balance between what is given and what is received.

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# diation Hazards from Medical and ental Uses of X-ray

JAMES B. DOUGLAS, M.D., *Louisville, Kentucky*

*adioactive fallout resulting from nic testing emphasizes the prob- of radiation from other sources. re than half of the radioactive ex- ure that a person receives during lifetime is from medical and den- equipment. Those who use x-ray ipment must develop precaution- measures.*◀

It has been estimated that the erage person living in the nited States would receive gon- al radiation during the first years of life of from 3.0 to r, depending upon the alti- le, the type of habitation and er factors. Exposure from ra- active fallout is already 0.1 *r*, d if weapons testing continue the present rate, might in- ase to 0.2 *r*. Exposure from dical diagnosis and therapy s estimated to be 4.5 *r* over a iod of 30 years, 59% of the al.

The incidence of leukemia in rvivors of the atomic blasts r the hypocenters of Hiro- ma and Nagasaki was 12 times that in survivors at the periphery of the blasted areas. An increase in the incidence of leukemia was reported in persons in Britain who had been treated for spondylitis by x-ray. The doses commonly used in this group were greater than those ordinarily used in such cases in this country.

Development of cancer of the thyroid and of leukemia was reported in children who had been treated by x-ray for enlargement of the thymus. Some of the doses used were quite large, and this type of treatment is not being given ordinarily in this country any longer. There was a reported increase in the incidence of leukemia below the age of 10 in children whose mothers had been exposed to x-rays during pregnancy.

### Reasons for Control

The National Committee on Radiation Protection recommends that exposure from man-

made radiation be kept below 10 *r* for the first 30 years of life. Adults under 30 should be particularly considered since they will be the parents of the majority of the next generation. Pregnant and potentially pregnant women should be guarded because of the hazard of double exposure. There are some indications that a fetus may be more sensitive during the first three months of gestation. Infants' and children's longer life expectancy and procreative potential make both somatic and gonadal exposure a matter of serious consideration. Due to their small size and unpredictable movements, shielding and localization of exposure are particularly difficult.

**Preventive Measures**

Radiation exposure may vary greatly for any procedure, depending upon the equipment and the skill and interest of the examiner. Some of the measures for limiting exposure of the patient are:

1. Fluoroscopy should not be used as a screening procedure. When used it should be of shielded design, properly adjusted, and its output should be tested and known.

2. There should be at least 2 mm. of aluminum added filtration, the tube at least 18 in. from the patient.

3. The output at the table to should not exceed 10 *r*/min.

4. The eyes of the fluoroscopis should be completely accommo dated, usually for from 15 to 2 minutes.

5. Relatively high kilovoltage and low milliamperages shoul be used (2 ma. adequate for mos chest examinations, 3 for abdom inal work.

6. The lead shutters should b adjusted so that the field si is as small as is practicable a all times, the tube being ene gized only intermittently whil actual observation is in progres

7. The beam should be ke away from the gonads, and film taken of doubtful findings.

There are few if any comm nities in the United States whe routine chest x-rays are jus fied as the initial procedure persons under 15 years. The t berculin skin test is the initi procedure, films being employe for those with positive reaction Chest surveys are best routin among older patients. It seem wise to use x-ray pelvimetr only in cases of clinical indic tion.

The physician or denti should ask himself, "Does th useful information justify an likely hazard?" Concern ove exposure must not impair th quality of the needed proce ure.◀

*J. Kentucky M.A.*, 57:1062-1065,1959.

# Idiopathic Paroxysmal Myoglobinuria

G. W. DAUGHERTY, M.D., *Rochester, Minnesota*

*The common symptoms of the disease presented here are pain, weakness, and discoloration of the urine. This serious condition occurs when there is muscle necrosis and may be precipitated by various causes. The patient responded to bed rest and forced fluids only, and returned to normal routine within a week.*

Myoglobinuria usually has muscular weakness, pain, pseudoparesis and abnormally appearing urine as the predominant clinical features of an individual attack. Repeated attacks may result in muscle atrophy. The condition is extremely rare, having been noted in association with muscular dystrophy, as a familial disorder and as an apparently "idiopathic" condition. Secondary types of myoglobinuria may occur after extensive muscular trauma of varied types, and as epidemic myoglobinuria or Haff disease, apparently caused by the ingestion of fish taken in certain waters.

A man of 26 of sedentary occupation was engaged with others of his age in a game of football at a picnic. Two weeks previously a physical examination with the usual laboratory tests and one for porphyrins in the urine showed no abnormalities. The afternoon was warm and the usual protective equipment was not worn. After some 45 minutes of this activity, the patient noted general aching with occasional cramping of both thighs and calves, but continued to play for another 30 minutes. At this time he became very warm and went in cold water, swimming and resting alternately for the next hour. During this period the discomfort was mild.

He then drank a can of beer and resumed the game for another 45 minutes. Discomfort remained in both lower extremities. On arriving home for the evening meal, he was fatigued and limped slightly. Urine passed at this time was of normal color, but darkened on contact with water. Urine voided an hour later was darker.

In the early evening he had to use his hands to help maneuver his legs into his car. Later while standing he broke out in a cold sweat and developed nausea and marked weakness. He was assisted to his car, which his wife drove to their home, where he made his way to his bed only by holding to one piece of furniture after another. He was unable to undress.

At this time a physician found blood pressure 100/70, temp. 100° F, marked weakness, pain on active motion, areas of ecchymosis over thighs and arms, tenderness to palpation and swellings in these areas. Urine was very dark, showing sp. gr. 1.024, acid reaction, albumin grade 2, granular casts 3, and no erythrocytes or leukocytes. Benzidine test was positive, and there was marked polydipsia. Tests for urinary porphyrins were negative. No intracellular granules of hemosiderin in urine, nor hemoglobin in plasma. Seru bilirubin and red and reticul cyte counts were normal.

The next day the patient wa confined to bed. Weakness an pain in muscles persisted, an he passed small quantities very dark urine in spite of large intake of fluid. The ne day he returned to work, though he limped and sorene and weakness of the anteri thigh and calf muscles conti ued. Symptoms disappeared ov the next 3 days. A week aft the incident he mowed his la without difficulty.

The diagnosis was suggeste by the dark urine and positi reaction for occult blood despi absence of erythrocytes in t sediment and no evidence of hemolytic disease or porphyri

Absolute identification is ma by spectrometric studies of t abnormal urine.◀

*Proc. Staff Meet. Mayo Clin.*, 34:395-397,1959

**Acrodynia**

Most of the cases of acrodynia have been reported from Western Europe, especially Switzerland, France and England. Onset is usually at from 6 months to 4 years with moderate upper respiratory tract infection with some fever and vomiting. The finger and toe tips become erythematous, the erythema gradually spreading. Photophobia, i creased muscle tone, and eleva ed blood pressure are usual fe tures. Tachycardia and hype tension are considered pathogn monic. There are no specific l cal changes. The disease shou be thought of when a small chi is being treated with a mercuri

Smeby, E., *Nord. med.*, 62:1233-1234,1959.

### steria Monocytogenes eningitis

Listeria monocytogenes is an organism commonly found in any domesticated animals. When found in the human, it is usually in the cerebrospinal fluid. It may affect infants and adults, and apparently has a low degree of communicability. Its entry to the human most likely is via the respiratory route, possibly also through the gastrointestinal tract.

The organism may be present in the human more often than is realized. It morphologically resembles the Corynebacteria and the diphtheroids and so may be considered a contaminant and its identification overlooked. It may also be confused with a betastreptococcus and again be considered to be a contaminant. All diphtheroids isolated from spinal fluid should be tested for motility on semisolid medium incubated at room temperature. If motile, the organisms should be tested for virulence in mice and rabbits, and serologic identification done. Sensitivity of this organism to the various antibiotics and sulfa drugs varies, studies made on two cases and from reports in the literature indicating that the organism is usually sensitive to several antibacterial agents.

Houghton, J. H., *Wisconsin M.J.*, 58:245-246, 1959.

### Poliomyelitis Infection Among Hospital Personnel

A certain percentage of persons (particularly children) infected with the virus of poliomyelitis show no symptoms. A number of such children in hospitals excrete the virus, exposure therefore being particularly great among the personnel of children's hospitals. Three determinations of complement fixing antibodies against poliomyelitis were made on the venous blood of samples from members of the staff of a large children's clinic. Physicians, nurses, and physical therapists were included, while 44 children and 71 adults served as control groups. Physicians and senior nurses showed positive complement fixation reaction of 16%, as did the control group of adults. Among the younger students and the physical therapists in training, the positives were 50%. The type of work performed as well as the immunobiologic processes may play a part in the different rate of positive findings.

Sachtleben, P., & Schellenberger, A., *Deutsche med. Wchnschr.*, 84:1142-1145,1959.

**Psychiatric Aspects of Aging**

The usual aging psychiatric patient has an agitated depression, a condition of forgetfulness, confusion, disorientation, impaired judgment and hallucinations, or one in which anxiety and somatization are the principal symptoms. For the agitated and restless patient drugs are available to calm and promote sleep without causing confusion. Chlorpromazine (Thorazine) orally in 25 mg. doses, given every four to six hours as needed and increased to 50 mg. at bedtime or later is most helpful. For sleeplessness, 50 mg. promethazine HCl (Phenergan) given intramuscularly will often be effective. Iproniazid (Marsilid) helps 45% of depressed patients by producing a sense of well-being and improved appetite. The dose is 25 to 50 mg. orally, once a day. Results may not be manifest for a month. There is no dependable euphoriant, though methylphenidate (Ritalin) and deanol (Deaner) are helpful in some. A combination of nicotinic acid, 50 to 100 mg. and pentaethylentetrazol (Metrazol), 1½ gr. orally seems to eventually allay confusion and restlessness in those with senile and arteriosclerotic deterioration, and may also stay rapid intellectual disintegration. If used, the drugs should not be prescribed for more than 90 days.

If the depression is se[v]ere a[nd] not organically based, electr[o]convulsive therapy (ECT) giv[es] with proper safeguards is effe[c]tual and relatively safe. Ment[al] deterioration is as much a matt[er] of attitudes and situations as [it] is of cellular damage. There is [no] consistent relationship betwe[en] the amount of cellular damage [in] the central nervous system a[nd] the behavior of the individual. [A] person having no interests, [no] stimulating and enjoyable rel[a]tionships with people, no pla[ns] and no hopes is dying little [by] little.

Good vision, good hearing, a[nd] good feet go a long way towar[d] helping a person live fully. Mi[d]dle-aged and elderly persons c[an] learn the same things as you[ng] adults, allowing for reduc[ed] speed and visual acuity.

People should be prepared f[or] retirement years before it come[s]. At one manufacturing compan[y] employees beginning at age [40] are taught how to live happi[ly] in retirement. Consultants i[n] medicine, law, dietetics, dive[r]sionary activities, and oth[er] phases of life all contribute t[o]ward a comprehensive and co[n]tinuing program of teaching me[n] and women how to live full an[d] fruitful lives. It continues its i[n]terest and support after retir[e]ment of the employee.

Kay, F. A., *J.M.A. Alabama*, 29:16-17,1959

## ctors Associated with ronary Disease

Altho gh persons may not ve coronary disease because of eir job, they may select their bs because of the disease or for nother neglected reason truly ssociated with causation. In the me way, the small but definite ssociation of smoking with coro- ry heart disease is not explain- ble. Studies according to socio- conomic status have shown a egular relationship with mortal- y assigned to coronary artery isease.

There is some evidence relat- g exercise to atherogenesis as- uming that serum cholesterol evels reflect the status of athe- ogenesis. It has been shown that verweight is weakly associated ith hypercholesterolemia. Ex- rcise and overweight obviously re related in an inverse manner, xercise blocking the hypercho- esterolemic effect of overeating. his relationship is reminiscent f the immunity to glucosemia xercise confers upon the diabet- c. Exercise is likely to have a iochemical relation to lipid me- abolism, and also may be the mportant influence in the main- enance of collateral circulation n impaired coronary vascular rees. It can be recommended as reasonable, pleasurable, and profitable enterprise for all with coronary disease.

Mann, G. V., *Illinois M.J.*, 116:20-21,1959.



*just pour powder from one packet*

•

**each packet is equivalent to one rounded teaspoonful of Metamucil powder.**

**it's new INSTANT MIX METAMUCIL**

*add cool water slowly ...it's instantly mixed*

•

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**it's new INSTANT MIX METAMUCIL**

### pontaneous emopneumothorax

This condition is shown by the ppearance, usually successive, f air and blood in the pleural avities. Among 2 cases studied detail and 286 reported cases, he incidence of spontaneous to otal number of cases ranged rom 4 to 12%. Only 11 of the otal number of cases were reorted in women. More than 0% were in men aged 17 to 32, he great majority of these enaged in physical work or parcipating in strenuous sports. pontaneous pain is usual at the nset, appears suddenly, and enerally is submammary but nay be felt even below the diahragm. Atypical irradiation nay lead to serious errors in iagnosis and treatment. Dyspnea may be moderate or severe. n many cases cough is troublome, and slightly elevated temperature is an almost constant eature. In a few cases there is oss of consciousness. Signs of nternal hemorrhage may pass unnoticed, attention being diverted to other signs. Emergency horacotomy may be required. mmediate referral to a surgical enter is advisable.

Bourgeois, P., et al., *Rev. tuberc.*, 23:513-532, 1959.

### Clinical Aspects of Middle Lobe Syndrome

A series of 21 patients were observed with atelectasis confined to the middle lobe of the right lung and chronic inflammatory and fibrous changes of the parenchyma resulting from temporary or permanent bronchostenosis. The symptoms corresponded to those of chronic pulmonary disorder and were not characteristic. Fourteen of the 21 were operated on, seven treated conservatively. Of the 14, 11 had lobectomy, one a bilobectomy, one a thoracotomy, and one a bronchotomy with removal of a foreign body. There were no operative deaths. Postoperatively, one patient had hydropneumothorax treated successfully with Monaldie's drainage. Follow-up indicated that all the patients were doing well except for the one having had bilobectomy and readmitted because of pneumonia of the remaining lobe. All patients in whom neoplasm can be excluded, or presenting positive signs of chronic pulmonary suppuration, bronchostenosis, bronchiectasis, abscess, or bronchial calculi should be treated surgically.

Peiper, H. J., *Arch. klin. Chir.*, 290:231-259, 1959.

**Subtotal Gastric Resection in Peptic Ulceration of the Stomach and Duodenum**

The most commonly employed surgical procedure for peptic ulceration of the stomach and duodenum is subtotal gastric resection. Since the results of this procedure are often not completely satisfactory, vagotomy with an emptying procedure or combined with hemigastrectomy is now frequently being used. An analysis of a series of 400 patients operated upon from 1946 to 1958 has been made in order to appraise the results of subtotal gastric resection. The gastro-jejunal ulcers were treated by subtotal gastric resection only. Thirty per cent of the patients were women. Indications for operative treatment were long-established symptoms, such as chronic pain, hemorrhage (uncontrolled or recurrent), obstruction, repeated perforations, and, in the case of gastric ulcers, possible malignant change. The duration of symptoms in most instances was 10 to 20 years except in patients with gastric ulcerations. In general the best results were in patients with a long history of symptoms. Only 15 patients (3.7%) were operated upon for emergency treatment of bleeding. No resection was done at the time of operation for a perforated ulcer.

More recently anterior to posterior gastroenterostomy h been preferred. A gastroduod nostomy was done when feasib but no attempt was made compromise on the amount stomach removed. A Billroth procedure was used in 72 p tients, 31 of whom had gast ulcers. Early in the series a 60 resection and in the past fi years a 70 to 75% resection w done. Antral exclusion, done nine early cases due to the ha ardous operative condition the duodenum, is no longer e ployed. Concomitant cholecy tectomy was done in 10 cas (2.5%). Multiple procedur were employed occasionally, ideal circumstances.

Antibiotics were used proph lactically early in the seri therapeutically only in the pa five years. Patients without co plications were usually ready f discharge on the seventh pos operative day.

Four patients died postoper tively. Two of these deaths we due to anesthesia, one after sp nal anesthesia, hypotension an anoxia, and the other after us of succinylcholine chloride an resultant irreversible respirator paralysis. The third death wa from hemorrhage, wound dehis cence and cardiac failure, th fourth from peritonitis resultin from an unrecognized leak of th duodenal stump.

The mortality and morbidit

ere acceptably low. The recurnce rate could be lowered furer and the result be made ore satisfactory by a high 75%) resection. Although the tal results have been satisfacry, nutritional disturbances ocrred often enough that the adsability of a routine 75% reection is doubtful. Vagotomy ith an emptying procedure may ventually prove to be preferble. Vagotomy with pyloroplasy is a simple procedure and the sults to date are encouraging. artial gastrectomy with vagotny is appealing, but the morlity and morbidity limit its use. The procedure should be hosen to meet the needs of ach. For patients whose weight as never been a problem, a igh subtotal gastric resection ill usually result well. For the nderweight, vagotomy with pyoroplasty may be best. In cases n which the condition of the uodenum precludes pyloroplasy, or the stomach does not empty properly, partial resection ith vagotomy would seem indiated. The emotionally unstable arely do well after any surgical neasure, a high gastric resection ncreases their complaints. Vagotomy with an emptying operation or resection should not be done unless the surgeon is sure of the completeness of the vagotomy. In patients whose nutrition was poor (in the absence of obstruction) before operation, extensive resection cured the ulcer, but nutrition continued poor. In such cases we are inclined to do a vagotomy with pyloroplasty.

Clausen, E. G., & Jake, R. J., *California Med.*, 90:407-410,1959.

**Spontaneous Costal Fracture**

Spontaneous fractures of the ribs are rare, but occur more frequently on the anterior or lateral surfaces of the lower ribs near the cartilages. They are generally discovered on routine examination of the chest, having caused no symptoms. Violent respiration, awkward movements, cough, or some attendant circumstance of parturition are the common causes. Predisposing causes are emphysema, fragility of bones of the aged, osteoporosis and diffuse bone disease.

A man of 62 admitted in an advanced stage of histoplasmosis, pulmary emphysema and diffuse osteoporosis proved to have bilateral fractures of the 6th to 9th ribs, near the spine, this having occurred without symptoms and within an interval of a few days after admission. Palpation of fracture sites produced no pain and the fractures were detected on routine x-ray examination. Defective healing was shown by this examination and by examination of a biopsy specimen.

Sanguinetti, F. A., et al., *Prensa méd. argent.*, 46:791-793,1959.

**Comparison of Surgical and Medical Management of Biliary Tract Disease**

Of 106 patients having died primarily of biliary tract disease over a period of nine years, 43 were operated on for relief of biliary tract disease. Autopsy was done on 12 (28%) of these 43 and on 16 (25%) of the 63 having died without surgical treatment. Of the 43 operated on, 16 had chronic calculous cholecystitis and five gallbladder perforation. Five of the patients operated on had cancer of the head of the pancreas and 10 cancer in the duodenal papilla, gallbladder, liver and common bile duct. The remaining 7 had acute inflammatory hepatobiliary disease. Of the 43, 28 had remediable disease in the biliary tract. In three patients death was ascribed to errors in surgical technique. Additional diseases and complications in 17 included myocardial infarction, pulmonary emboli, duodenal ulcer, pancreatitis, acute appendicitis, hemorrhage, diabetes, acute renal insufficiency, and primary tuberculosis. Except for the eight with myocardial infarction, 20 patients (46%) with benign disease could have been saved. Of the 63 not operated on, 13 had acute cholecystitis, two gallbladder empyema, and 26 cancer of the head of the pancreas or in the common bile duct or other parts of the biliary tract, a could not have been saved. the remaining 37 with non-m lignant disease, 11 had additio al irremediable disease, leavi 26 (41%) whose non-malign biliary tract disease was t cause of death. A total of (43%) of these 106 deaths mig have been prevented by ad quate management and ea surgical treatment.

Sterling, J. A., et al., *Am. J. Gastroente* 31:241-249,1959.

**Transcranial Yttrium 90 Hypophysectomy**

A 15-month follow-up stu shows that this procedure h been followed by an arrest breast cancer in eight of the women with cancer of 12 mont duration or more. Regression h persisted for 13 months in thr cases. The procedure appro mates surgical hypophysecto in safety and in effectiveness the treatment of breast cance $Yt^{90}$ hypophysectomy is now pr ferred to the transsphenoid method, but comparison of t advantages of the two a proaches must await further d tailed analyses. Total destru tion of the gland may not be e sential for favorable response cancer of the breast. Other fa tors (primarily endocrine glan dependence) are weighty consi erations.

Evans, J. P., et al., *Surg., Gynec. & Obst.*, 1 393-405,1959.

**gina Pectoris: Protection th an Oral Theophylline eparation**

The antianginal effectiveness an oral preparation containing ee theophylline 80 mg./15 cc. a 20% alcohol vehicle (Elixo-yllin) was evaluated via dou-e-blind technique in a series 30 patients, 15 of whom re-ived the medication and 15 a ysically identical placebo. All the patients were aged 46 to , about ⅓ being 60 or older. iagnosis had been clearly estab-shed in all cases and all had erived prophylactic and thera-eutic benefits from nitroglyc-in. Myocardial infarction had een experienced in 6 of the 30, e remainder having coronary eart disease without infarction. osage was 3 tablespoonfuls aily given in 3 divided doses. he treatment and placebo roups were interchanged every weeks for the duration of the udy (8 weeks). In all of the atients response was deter-ined by subjective report of ain relief, and in 14 (repre-enting both the treatment and lacebo groups) by ECG meas-rement of ST segment depres-ion following exercise.

Response was considered good to excellent in 16 of the 30 patients during both courses of therapy with the medication, while in no instance was a consistently favorable response noted with the placebo. The percentage of patient-days associated with less or no pain was 35.1 during treatment with placebo, 76.0 during treatment with the theophylline preparation. Protection was noted within 20 to 30 minutes after each dose and lasted for at least 2 hours. Post-exercise ECG readings in 11 of the 14 patients tested repeatedly following administration of 75 cc. of the theophylline elixir were considerably less positive than those following administration of the placebo. In 7 of these 11 readings were similar to those following administration of nitroglycerin but lasted longer, while in the other 4 they were mildly to moderately positive but in no instance comparable to those obtained after administration of the placebo. Of 52 post-exercise ECG readings taken in 12 patients treated with maintenance doses of the theophylline preparation, 38 showed improvement over those taken while the placebo was being administered. None of the patients showed less abnormal post-exercise ECG readings

while receiving the placebo. Effectiveness of the theophylline preparation is attributed to its rapid rate of absorption.

Russek, H. I., *Am. J.M. Sc.*, 239:187-193,1960.

**Present Management of Hyperthyroidism**

Some 90% of hyperthyroid patients can be made good surgical risks by 10 to 14 days of treatment with Lugol's solution alone. For the remainder, a more prolonged period (perhaps 6 weeks) of treatment with propylthiouracil precedes the surgical treatment. Adenomatous goiter with hyperthyroidism should be removed surgically. The possibility of carcinoma of the thyroid is no longer controversial, the only problem being the exact incidence of such development. The existence of hyperthyroidism is no guarantee of immunity against the development of malignant tumors, but fewer people with toxic adenomatous goiter also have thyroidal carcinoma. Subtotal thyroidectomy in these patients gives excellent results. The toxicity is overcome in a matter of days, and the recurrence rate of a true toxic adenomatous goiter is only 0.5%, however, there is a higher mortality rate among these patients. The patient may present a tremendously enlarged heart, gross irregularity of the pulse, hydrothorax, ascites and anasarca as well as an adenomatous goit present for many years. Lugo solution is much less efficient this type of goiter. The patie should be treated as vigorous as possible to correct the cardi decompensation and the tox state, so that operation may done with reduced risk.

Carcinoma of the thyroid is e countered in some 10% of single nodules treated surgicall and in 5% in the multinodul gland. The possibility of car noma progressing to an alarmi state before it is recognized su gests that patients be urged have the apparently simple g ter removed before toxic chang occur, yet a definite place r mains for subtotal thyroide tomy. The present-day low mo bidity and mortality rates f thyroidectomy have reached a most the logical end point. Pro er preparation and selection patients have been responsib for this.

The use of goitrogens as d finitive therapy has been disa pointing to many. Use of radioi dine appears to be a rather sim ple, frequently effective and us ally lasting therapy, especial for exophthalmic goiter. It ma prove some day to be the metho of choice, but, at the presen time, there are still unknow factors deterring its univers employment.

Judd, E. S., *Minnesota Med.*, 42:926-929,19

**fected Mastoid Cavity**

Some discharging mastoid cav-
es ar resistant to all usual
rms o therapy including cur-
tage and skin grafting. A new
eatme t designed to eliminate
tors prolonging these infec-
ns includes the following 3
eps:

1. The cavity is cleaned of de-
is by gentle spot suction and
all cotton applicators. Any in-
ted granulation tissue is re-
oved or lightly cauterized.

2. The entire cavity is dried
th a cotton applicator used
th a blotting, not a wiping, ac-
on.

3. An antibiotic powder is gent-
insufflated. Made of equal
rts of chloramphenicol and
lfanilamide, this powder has a
oad antibacterial spectrum but
es not "cake" as some tetra-
cline derivatives do.

For most patients this treat-
ent can be done at home. The
vity is dried and insufflated (1
2 puffs) 2 or 3 times daily,
sing a fine wire applicator bent
ar the wrapped end for blot-
g (not wiping) and an Ar-
our inhalator (with the cap-
le placed with the open end
ward the bulb) for insufflating.
e patient is seen again at the
fice in 4 to 7 days, the cavity
ten being dry by this time. He
seen again in about 3 weeks,
hen any crust can be removed,
d is given an appointment for routine cavity hygiene in 3 months. The patient reinstitutes treatment if moisture recurs, coming into the office if discharge persists more than 3 days.

This treatment has given good and sometimes dramatic results over the past 3 years. It is effective wherever the same underlying factors are found, as in certain cases of subacute and chronic otitis externa and otitis media. Except for preventing secondary infection, it has no noticeable effect on the mucoid discharge associated with allergy and tubal blockage.

Sheey, J. L., & House, H. P., *A.M.A. Arch. Otol.*, 70:509-510,1959.

**Tolbutamide, Chlorpropamide and Metahexamide: Comparative Hypoglycemic Effectiveness**

A group of 110 diabetic patients treated either with tolbutamide (Orinase), chlorpropamide (Diabenase) or metahexamide received in addition a 2000-calorie diet of 250 gm. carbohydrate, 90 gm. protein and 70 gm. fat in three meals equal in food value. This diet was adjusted according to body weight in some cases. Plasma glucose levels were determined in fasting state, then two hours after ingestion of one of the drugs and breakfast. Analysis was made of two measured separate 24-hour urine summary specimens collected with preservative on successive

days. Clinic or office visits were made weekly the first month, monthly thereafter. Patients received one of the drugs immediately after the fasting blood sample was taken and before breakfast.

Requirements for good control included at least one of the following:

1. Glycosuria O, with fall in plasma glucose levels in the non-insulin, glycosuric patients.

2. Marked fall in the fasting and postprandial plasma glucose levels from that previously recorded in patients while they had been managed by diet restriction only.

3. Freedom from symptoms, ideal body weight, and absence of ketosis and hypoglycemic reactions.

A patient was considered to have a fair response when these criteria were only partially fulfilled.

Of 62 patients (45 women and 17 men) treated with tolbutamide—51 for 18 months, six for 36 months, five for shorter periods—22 were aged 40 to 60, the remainder 60 or beyond. Fifty-two received 2.0 gm. or less, 10 more than 10 gm. tolbutamide daily. Control was good in 56%, fair in 29% and poor in 15%.

Of the 42 patients (28 women and 14 men) receiving chlorpropamide for as long as 14 months, age range was 33 to 76. All but one had the "adult onset" ty of diabetes. Initial dose in t first 14 patients in this group w 1 gm., in the remaining 28, 0. gm. because of hypoglycemic r actions. Maintenance dosage w 0.5 gm. or less daily for 40 these patients, 0.05 gm. daily f the remaining two. Control w good in 66%, fair in 19% a poor in 15%. Of the six failur two (with borderline juveni type diabetes) also received to 60 units of insulin per da while in three dietary laps were strongly suspected.

All of the six patients recei ing metahexamide (4 men a 2 women, aged 48 to 70), had t "maturity onset" type of di betes. Two of these cases we newly discovered while two h been managed on diet alone a the remaining two on 10 to units of insulin daily for three four years. All of these cas showed good control during t observation periods, longest which was three months.

The vast majority of adult p tients are obese, correction this alone producing satisfacto control in a large percentage cases. These cases, plus those the "juvenile" type, leave a co paratively small number suitab for management with the or sulfonylurea hypoglycem agents.

Drey, N. W., et al., *Missouri Med.*, 56:10 1019,1959.

**Placental Implantation For Peripheral Vascular Disease**

Following the reported use of various tissue implants as an aid in corneal grafting 25 years ago, many studies have advocated placental tissue or placental extract in the treatment of a variety of diseases, e.g., for advancing the healing of wounds and ulcers, in disturbances of the climacteric, skin wounds, intestinal fistula, and both as an implant and a surface application for ulcers. In the present series of 39 cases, procedure involved delivery of the placenta directly from the maternity unit in a sterile container. The blood group of mother and placenta was established. Under full aseptic precautions a number of 1-cm. cubes of the cotyledon surface were excised, and each cube was placed in a universal container with 1 mega unit of penicillin dissolved in 4 ml. of normal saline. These containers were incubated at 4°C. for five days. Three 1-cm. cubes were implanted subcutaneously in the thigh of the maximally affected limb, through small separate incisions.

Of the 39 receiving these implants, 27 felt a noticeable effect. Most patients obtained some relief of their symptoms, especially as judged by their claudication distance. The feeling of increased warmth in the limbs noted by all improved patients was accompanied by a rise in the skin temperature and a better response to the reflex heating test in seven out of 28 cases. Oscillometry showed an improvement in only two out of 28 cases and in no case was any alteration in pulses noted.

Of five patients having deteriorated despite previous lumbar sympathectomy, placental implantation gave a good result in two, while two of the three remaining patients failed to respond to sympathectomy.

The possibility that any effect is due to a non-specific reaction to foreign protein introduced in the placental tissue seems unlikely. The fact that the injection of the fluid in which the placental tissue had been stored for five days gave a satisfactory (even if temporary) response suggests that some substance in placenta is responsible for the effect, and that this effect lasts longer when active placental tissue is implanted.

In two cases the implant was removed after amputation and had remained viable after several days. In cases with remission of symptoms it was noted that the longer the implants remained palpable the longer the relief of symptoms. In five patients showing a good effect from the first implant a second was made, the producing a satisfactory response in three.

Arteriograms were carried out all patients, 14 of whom owed a localized block in the ore involved limb. Nine of ese 14 were generally unfit for y major surgical procedure, hile another had additional oss atheroma and an additional e a block in the popliteal fos- with no filling of the collateral essels. The remaining patients this series showed generalized herosclerosis, six of whom ave since died as a result of yocardial infarcts or cerebro- scular accidents. Although acental implant causes subjec- ve improvement in the patient's mptoms and has a useful place the treatment of peripheral scular disease, the active prin- ple by which it acts has not een determined.

loner, C. W. A., & Gunn, A. A., *Brit. M.J.*, 2:558-541,1959.

**ilonidal Sinus: urgical Treatment**

This consists of fairly wide ex- sion of the sinuses and sutur- g of the skin edges to the sac- al fascia, leaving between the dges a strip of sacral fascia a uarter of an inch wide. This erves to obliterate the dead pace. Healing is fairly quick, ost of the cases being healed ithin 3 or 4 weeks following peration, and recurrence by is method is rarely seen.

afford, H. S., *Brit. M.J.*, 2:1022,1959.

**Cavernous Sinus Thrombosis**

A case of bilateral cavernous thrombosis, which nearly proved fatal, resulted from squeezing a furuncle on the left upper eyelid. Pus introduced into the venous blood channels of the upper lid and passed along the ophthalmic vein of the left eye and into the cavernous sinus. Here a thrombophlebitis was set up (extending through the intercavernous sinus or sinuses to the contralateral cavernous sinus) interfering with the venous drainage of the right eye, which then became chemotic, edematous and proptosed.

Of the two types of cavernous sinus thrombosis, the first is due to acute infection of the sinus producing the classical signs noted in the illustrative case, while the second is a slowly obliterating thrombophlebitis in which obstruction of the sinus slowly develops and the signs of acute thrombosis do not occur. Symptoms, arising from involvement of nerves passing through the sinus as a result of inflammatory edema or direct pressure, may be paralysis or paresis of the third, fourth and sixth nerves, paresthesia or anesthesia of the first branch of the fifth, and transient or permanent diplopia.

Headache signifies meningeal irritation from perisinus infiltration or suppuration of bo in the vicinity of the mening Blood cultures aid greatly the diagnosis.

Prior to antibiotics there we few recoveries (one study of cases reporting 21 deaths). T use of massive doses of antibi ics in combinations known be effective against the offendi organisms, anticoagulant the apy, and supportive measur has greatly improved the ou look (one recent study reporti 60 survivors among 98 cases). the illustrative case, heparin w used as an immediate anticoag lant, then coumarin for maint nance. Penicillin was admini tered at a dosage of 1,000,0 units every two hours, chlo amphenicol at a dosage of 5 mg. every six hours, and er thromycin 500 mg. every s hours. Achromycin at a dosa of 250 mg. every six hours w given at onset, but was term nated because of the staphyl coccal origin of the disease. B cause of the severity of the i fection and the grave prognosi vancomycin 500 mg. admini tered intravenously twice a d was also used. Streptokinas streptodornase administere buccally was used as a means controlling the edema of the ey lids, and in an effort to facilita the entry of antibiotics into t septic areas.

Pratt, L. W., *J. Maine M.A.*, 50:317-323,19

### oice in Diagnosis of yxedema in the Elderly

Most persons past age 60 will mplain of some symptoms mmonly associated with my-edema, i.e., increase in weight, nstipation, falling hair, sensi-vity to cold, dry skin, difficulty walking, vague limb pains, iling of memory and concentra-on, slow thought, and dizzy pells. Voice change and speech eculiarities form a combination most pathognomonic of the dis-ase. The voice has been de-cribed as being like a bad gram-phone record of a drowsy, ightly intoxicated person with bad cold and a plum in the outh.

In five of 22 cases of myxede-na the voice change was the nly striking sign of the condi-ion. Voice changes are divisible nto two main groups as follows:

1. Alterations in Quality (low itch, an increased nasal and hlegmatic quality). Dysarthria s experienced and the voice ounds husky and harsh.

2. Alteration in Diction. There s difficulty in articulation, peech being slow and deliber-te. Although certain words are ften stumbled over and slurred, some are spoken rapidly. Groups of words may be slurred and may show a mixture of rapid and slow diction.

Lloyd, W. H., *Brit. M.J.*, 1:1208-1211,1959.

### Echogram: Ultrasound for Locating Intraocular Foreign Body

Foreign bodies difficult or impossible to locate by x-ray or ophthalmoscopy, such as slivers of aluminum, chips of wood or stone and splinters of glass, can be found with the echogram registered by an ultrasonic apparatus. This method, quickly applicable while an operation is in progress, also indicates the extent of intraocular damage by revealing vitreous hemorrhage, retinal detachment and luxation of the lens. By directing impulses in several directions the approximate size and shape of the foreign body can be determined. Adjustments with the equipment available make it possible to find foreign bodies lying only 1 mm. from the surface of the eye or to learn whether a foreign body near the posterior surface lies inside the eye, in the sclera or in the orbit.

Oksala, A., & Lehtinen, A., *Brit. J. Ophth.*, 43:744-752,1959.

**Benign Polyp of the Ureter Diagnosed by Pyelography**

Tumors of the ureters, frequently a cause of impaired renal function, require retrograde pyelography for their demonstration. In an illustrative case a woman of 37 was admitted with a history of intermittent pain in the left quadrant of the abdomen. Her past history revealed excision of a cyst from the thyroid gland, removal of a nodule from a vocal cord and dissection of the right breast for a "cyst". Physical examination disclosed a palpable mass in the upper quadrant of the right breast. The kidneys were not palpable. Blood hemoglobin was 76%; the white blood count was 6,100.

Performance of excretory urography produced opacification of the right kidney in five minutes and maximal visualization at the end of 30 minutes. It disclosed the presence of mild hydronephrosis and hydroureter down to a classical ureterocele. No opacification of the left side was seen up to three hours after the injection of contrast medium. Retrograde pyelography of the left side permitted the introduction of the ureteral catheter only as far as the fifth lumbar vertebra, this procedure revealing an abnormal dilatation of the lower half of the ureter (only the margins of which could be visualized). Although an unusually long and smooth mass was seen occupyi almost the entire length of t demonstrated ureter, its inferi medial margin was not reco nized. There was no contra filling of the left renal pelvis calyces. The diagnosis was:

1. Right ureterocele causing h dronephrosis and hydroureter.

2. Nonfunctioning left kidne with ureteral obstruction of u known origin.

Transurethral resection of t ureterocele was performed on t right side three days after diagn sis, complete nephroureterecto two days later. Dissection of t gross specimen disclosed a co tracted, hydronephrotic kidne with a long pedunculated bif ureteral polyp. The latter aro from the ureter at a site 5 cm. b low the ureteropelvic junctio and extended downwards for distance of 15 cm. Composite py lographic and pathologic finding established final diagnosis of bifid pedunculated adenomato ureteral polyp with incomple obstruction of the ureter, an congenital cyst formation in th medulla of the kidney. Diagnos was based on the demonstratio by retrograde rather than on ex cretory urography of the mass i the left ureter since this mass wa smooth and spindle-shaped (th usual finding in the polypoid typ of lesion).

Schneiderman, C., et al., *Brit. J. Urol.*, 31:16 1959.

# octors and the Law

CHARLES J. FRANKEL, M.D., L.L.B., *Editor*

*Can attending doctor who, with patient's consent, called in a specialist to perform aortogram, be held liable for specialist's alleged negligence in performance thereof? Is it negligent to expose a patient on anticoagulant therapy to an aortogram? Is attending doctor negligent if he fails to perform a laminectomy when patient develops "a flaccid paralysis" after an unsuccessful attempt to perform an aortogram?*◀

These questions were before the U.S. District Court for the Eastern District of Pennsylvania in 1959 (*Dill* vs *Scuka*, 175 F. Supp. 26). Defendant doctor was treating plaintiff for a blood clot which affected the calf and foot of his left leg. While he was being treated in hospital, two other blood clots developed in plaintiff's chest. In order to further diagnose plaintiff's tendency to blood clotting, defendant requested the staff urologist and staff radiologist to perform an aortography. Plaintiff consented to the procedure knowing it would be performed by the urologist and not by defendant. The urologist, when he attempted to inject the dye into the aorta, was not satisfied with the nature of the blood found in the aorta and discontinued the procedure. Defendant was not present at the procedure and had no control over it. During the week following the attempted aortogram, plaintiff's nerve functions in his lower extremities deteriorated and he lost control of his lower legs from the hips down and became unable to urinate and have normal bowel movements. He suffered what was described as "a flaccid paralysis." Although there was no direct evidence of it, plaintiff's theory was that the urologist, in inserting the needle, had punctured the aorta and the spinal cord thereby causing a transverse myelitis.

Plaintiff contended defendant was liable for the alleged negligence of the urologist in performing the aortography. The Court said an attending doctor, by recommending a procedure

to be performed by a specialist, is not liable for the specialist's allegedly negligent acts. In this age of specialization in the practice of medicine it is the duty of courts of law to apply rules of law with an intelligent understanding of developing civilization in the field of medicine and surgery. It would be unjust to hold a family doctor liable for negligent acts of a specialist whom he might recommend. The Court also rejected plaintiff's argument that the urologist was a "mere technician" and that defendant, the attending doctor who called him in, should bear the primary responsibility for the urologist's alleged negligence. There was no relationship of employer and employee or of principal and agent between defendant and the urologist; each treated plaintiff independently. To hold otherwise, said the Court, would be a wrongful application of the rule of *respondeat superior*.

Plaintiff further contended he should not have been subjected to aortography because he was on anticoagulant therapy. Plaintiff's prothrombin time was 39 seconds. A doctor testifying for plaintiff stated that an aortogram is unsafe procedure where the patient's prothrombin time is 39 seconds; another doctor testified for plaintiff that a prothrombin time of 39 seconds was a b
derline case and should in
ordinary course of events,
corrected before initiating a
operative procedure. Other d
tors testifying for plaintiff sta
contrary opinions. They testif
the prothrombin time was not
a dangerous level and that t
aortography would be helpful
determining whether or n
Buerger's Disease was prese
In view of this conflict in t
testimony of plaintiff's witness
there was no error in concludi
there was no negligence in su
jecting plaintiff to aortograph

Plaintiff's final contention w
that defendant was negligent
not performing a laminecton
within 120 hours after the a
tempted aortogram. A medic
witness for plaintiff testified th
a laminectomy might have be
helpful to reduce the tenden
for inflammatory reaction a
might have prevented plaintif
condition. The Court said th
evidence was insufficient to su
port a finding of negligence. Th
expert has to testify that in h
professional opinion the result
question came from the cause a
leged. The testimony of plaintif
witness was a mere guess an
thus fell below the require
standard of proof.

►*Can doctor be enjoined from o
erating an office in residential di
trict, if zoning ordinance permi*

for all phases of

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*hospitals, clinics and nursing homes, but prohibits operation of a doctor's office, in such district? Can doctor's office be regarded as "clinic" within meaning of zoning ordinance?*◀

These questions were before the Illinois Supreme Court in *City of Champaign* vs *Roseman*, 155 N.E. (2d) 34 (1958). Defendant altered two-story dwelling to provide office space on first floor and set up his office for the practice of medicine in such space. The dwelling was located in residential district in which zoning ordinance permitted hospitals, clinics and nursing homes but prohibited operation of a doctor's office.

Defendant contended that zoning ordinance was arbitrary and void as a matter of law. He argued that a doctor's office is no more detrimental to public health, safety or welfare than the uses permitted under the ordinance and that the ordinance was arbitrary in permitting hospitals and clinics used for the diagnosis and treatment of human ills while denying him the use of his property for the same purpose. The Court said the difference between the two was apparent. Hospitals, whether public or private, are operated largely for the benefit of the public. They are normally located so that immediate emergency treatment is available to the public and in residen districts which are quiet. contrast, doctors' offices are i dividually owned and ope ated, and profit, altho gh n the sole motive, is a substa tial factor. If doctors offic must be permitted in resident areas where hospitals are p mitted, it would follow that de tists and persons engaged in other professions and occup tions dealing with the treatme of human ills would have a ju complaint if they too were n given the same privilege. T result might well be an office every block, with a result breakdown of zoning within t city.

Defendant further contend that his use of the property w permitted under the ordinan His theory was that his office w a "clinic" within the meani of the ordinance because what did there was the same as wh was done in a clinic. The Co said it interpreted the ordinan to mean that clinics are p mitted in conjunction with h pitals but not when operat separated therefrom. The p mitting of clinics in connecti with hospitals seems reasonab since the treatment of out-p tients by physio-therapy and t like by an attached clinic is more natural function of a hos tal than of a doctor's private

e. Defendant's use of his prop-
y for a doctor's office was,
refore, properly enjoined.

*s plaintiff in medical malpractice
ion, who voluntarily submitted to
sical examination by a doctor
request of defendant's attorney,
itled to copy of doctor's report on
h examination?*◄

This question was passed on by
e District Court of Appeal,
ird District, of California in
rgenson vs *Superior Court*,
9 P. (2d) 550 (1958). At the
quest of defendant doctor's at-
rney, plaintiff in medical mal-
actice action voluntarily sub-
tted to a physical examination
another doctor whose report
s transmitted to defendant's
torney. Defendant's attorney
fused plaintiff's request for a
py of the report on the ground
t the report was within the
torney-client privilege.

The Court said that the pur-
se of the attorney-client privi-
e is to protect communica-
ns between attorney and cli-
t. When it is necessary for the
ent to communicate informa-
n as to his physical condition
his attorney he may require
e services of a doctor. The
ctor is then the agent through
hich the communication is
de and his report would be
vileged. However, the same
le is not applicable when the
intiff is examined by a doctor
for the purpose of informing defendant's attorney as to plaintiff's physical condition. In such a case, the necessary element of attorney-client relationship is lacking and the essential feature of confidential intent in revealing information is also lacking and the report of such examination is, therefore, not privileged.

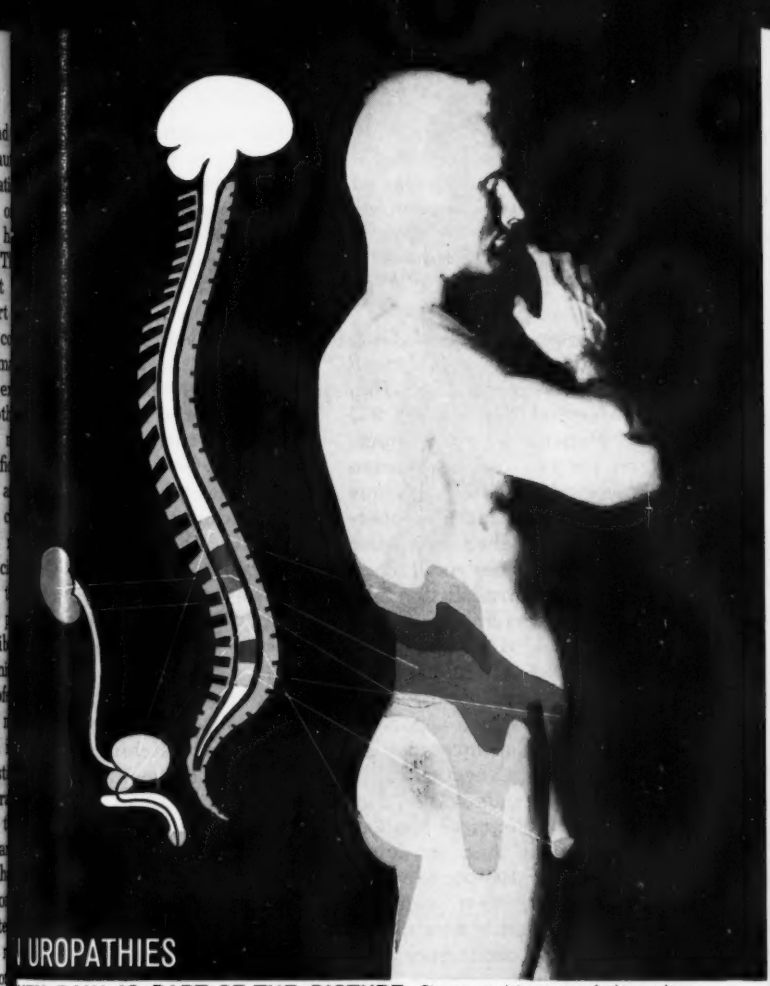
Defendant further contended that doctor who made examination is in the nature of an expert witness who has examined the subject matter of litigation and his report is thus privileged. If plaintiff had not voluntarily submitted to the examination, defendant would have had to get a court order requiring such examination and, under such a situation, plaintiff would have been entitled to a copy of the report. Therefore, said the Court, when the plaintiff voluntarily submitted to an examination, there is no reason to deny him a copy of the report.

►*Can doctor's license to practice be revoked on ground he has been declared by court to be mentally incompetent if, prior to revocation order, doctor has been discharged from hospital by court and declared mentally competent?*◄

This question was passed on by the Supreme Court of Washington in *Hubbard* vs *Washington State Medical Disciplinary Board*, 348 P.(2d) 981 (1960).

Plaintiff was committed on March 19, 1957 to state hospital by a court upon a finding he was mentally incompetent. Following a filing of a certificate of competency by hospital superintendent, the court on February 3, 1958 entered an order discharging plaintiff from the hospital and declaring him mentally competent. On February 15, 1958 a hearing was held by the board and the next day it entered an order revoking his license to practice under that part of the statute which provides that a "declaration of mental incompetency by a court of competent jurisdiction" constitutes unprofessional conduct for which a license may be revoked.

Plaintiff contended the board erred in giving effect to the court order committing him as mentally incompetent while ignoring the court order discharging him as mentally competent. The Court said that this argument overlooks the distinction between a doctor's being mentally competent to transact business in the usual way and his being mentally competent to practice medicine and perform surgery. The legislature has said that the declaration of mental incompetency by a court of competent jurisdiction constitutes unprofessional conduct warranting the revocation of a doctor's license to practice. However, it does not follow that a doctor so found be mentally incompetent is au matically entitled to a re torat of his license upon the entry later court order decla ing h to be mentally competent. T is so because the fact that has been found by the court be competent to execute c tracts, enter into a valid m riage, convey his property, e cute a will and engage in ot business transactions does *ipso facto* restore his qualifi tions to practice medicine a surgery. The doctor in these cumstances who desires to sume the practice of medic and surgery must convince board that he possesses the culiar qualifications prescrib by the legislature for obtain a license to practice this prof sion originally. Plaintiff did testify before the board and troduced no witnesses to test as to his mental ability to pr tice medicine and surgery at time of the hearing. The boa having found that plaintiff h been declared mentally inco petent by a court of compet jurisdiction, had authority to voke his license. The seco court order did not have legal effect of canceling out first order. If plaintiff's men competency to practice medici and surgery has been regain he may avail himself of the s tutory proceedings for reinsta



## UROPATHIES

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ment of a license.

►*Is the doctrine of res ipsa loquitur applicable in an action against hospital for death of patient allegedly due to negligence in administering incompatible blood during transfusion?*◄

The Supreme Court of Utah passed on this question in *Joseph* vs *W. H. Groves Latter-Day Saints Hospital,* 348 P.(2d) 935 (1960). Patient, who was operated on for removal of ovarian cyst, received transfusion of one pint of blood during the operation and of another pint after being returned to her room. During the second transfusion she manifested symptoms of undue distress, began to perspire and also to shake as if chilling. Ten days later she died of lower nephron nephrosis which apparently resulted from an incompatible blood transfusion reaction.

Plaintiff contended the doctrine of *res ipsa loquitur* applied. The Court said that, in determining whether the doctrine applied, it must first consider whether defendant's conduct in relation to the occurrence was explained in such manner as to preclude any reasonable finding of negligence on its part. The hospital's procedure with respect to transfusions is set forth below. The blood is taken from a donor of proper age, health and condition by one skilled in the art. Sterile equipment is used a the blood is run directly into pint bottle. Three same tub used in typing and matching t blood, are taken at the sa time and given the same numb as the pint bottle. Before a tra fusion is given, a sample of t patient's blood is taken a typed, matched and cros matched with the donor's blo These procedures, which are accordance with generally rec nized professional standar were followed here. The te showed that the patient's blo and that of the donor were of t same type. An Indirect Coom Test was also made which c firmed the blood was compati The Court said there was evidence to suggest any oth precautions which might ha been used in connection w typing and matching the blo Therefore, defendant's expla tion of its conduct in selecti the blood precluded any reas able finding that it was negli in that regard.

The second factor to be c sidered in determining if d trine applied was whether injury was one which, in the n mal course of events, would have happened unless defend were negligent. The doctrine applied with caution, particul ly in the medical field beca of the realization that many the aspects of the treatment

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human ills cannot yet be regarded as exact science and there may be a bad result even though recognized standards of care and skill are used. Here there was expert testimony that, even when the best methods known to medical science are used in the typing and matching of blood, hemolytic reactions occur in about one to five per thousand transfusions and that death may result 25%-30% of those suffering such reaction. Thus, even if it is assumed that the patient suffered a hemolytic reaction there is error in the view that this was something that may have occurred without negligence and that the doctrine of *res ipsa quitur* is, therefore, not applicable.◀

**Pulmonary Staphylococcia**

The radiologic signs, usually obtainable from the fifth day after onset, are those of pneumothorax, pneumatocele formation, variable infiltration, with peripheral emphysema, early encapsulation of the pleural effusion and hilar enlargement. Antiotic treatment resulted in recovery of 2 patients.

Roisinblit, A., et al., *Prensa méd. ar.* 46:630-638,1959.

# he Doctor Builds His Estate

*Prepared monthly by the Research Department of Bache & Co., 36 Wall Street, New York 5.*

*These monthly articles point out e method by which the physician y overcome the handicap imposed on him by taxes on the bulk of income at normal rates, as op- sed to the capital gains tax open many business men. One solution systematic investment of current come in securities.*◀

In a year when the stock mar- t "goes sour," so to speak, in- stors generally comb the lists ying to find a company with e of three characteristics. They k for stocks of companies in cession-resistant industries, e utilities, banks, food com- nies, etc. They look for com- nies in contra-cyclical indus- es, those which prosper when e economy is sagging, or in the g lead-time machinery indus- , where orders received dur- g boom periods are first being rned into deliveries a year or o later, when the general econ- y is on the downgrade. Final- they turn to companies whose oducts or services are so new and so well received that they are able to maintain their sales momentum even though business in general cannot.

This month, we are discussing one of each of these types of firms. The first, First Charter Financial Corp., is one of the fastest growing companies in America, and yet is in a recession-resistant industry, and offers the investor a chance to participate in the dynamic growth of California at an extremely reasonable multiple. The second, Mesta Machine Co., is a leading producer of steel and other mill machinery, which will benefit from the heavy capital expenditures planned by the steel industry and other heavy goods makers. The third, Plastic Applicators, Inc., is a small company whose services—applying internally baked plastic coatings to oil field tubular goods—has been so eagerly received by the oil industry that its growth should keep up for several more years

at close to the present pace despite the oversupply problems of the oil industry itself.

### First Charter Financial Corporation

Sparked by the gains in the past decade, the savings and loan industry has emerged as a major savings depository. California's position as the nation's number-one savings and loan state augurs well for those institutions doing business within its boundaries. One such institution is First Charter Financial Corporation. Its past record, as will be pointed out later in this report, has been exceptional, out-stripping even the phenomenal growth of the industry. Nothing on the horizon indicates a significant slowdown in the fast growth pace now being set. Based on this past record, future prospects, and comparative market appraisal of other similar institutions, we believe the shares of First Charter Financial are reasonably priced and offer the investor participation in a growth company within a growth industry.

First Charter Financial owns the stock of its operating subsidiaries and renders management services to them. The subsidiaries consist of five California Savings and Loan associations; two California corporations which act principally trustees under trust deeds; fi California corporations licens as insurance agencies; a Ca fornia corporation licensed as real estate broker and licens under the Savings and Loan A sociation Law of California an agent authorized to soli loans for one of the associatio a California corporation wh owns all of the capital stock one of the associations; and California corporation wh owns approximately 53% of t capital stock of another Savi and Loan association. The savings and loan associations ferred to above are licensed operate 39 offices in northern a southern California.

In the past decade savings a loan associations have gro faster than any other savings stitutions. The reasons for t favorable rate of growth inclu the greater population increas in states where savings and lo associations are located, the hig er rates paid on deposits, the t mendous demand for mortga loans, aggressive advertising a promotional campaigns, a steadily increasing personal come. Following is a table savings accounts in Californ savings and loan institutions a the percentage of this total h by First Charter Financial:

As can be noted, growth h

# ciatica

gesics alone merely
pain. New Medaprin
Medrol* to suppress
flammation that *causes*
in and stiffness.
to the direct relief of
uloskeletal pain,

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and 500 tablets, each
ing: 300 mg. acetyl-
c acid for prompt relief
; 1 mg. Medrol to
s the causative inflam-
; 200 mg. calcium
ate as buffer.

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THE UPJOHN COMPANY
KALAMAZOO, MICHIGAN

| Year | California Savings & Loan Accounts (In Millions) | First Charter As Percentage Of Total |
|---|---|---|
| 1959 | 7,350 | 6.21 |
| 1958 | 6,079 | 5.85 |
| 1957 | 4,987 | 5.66 |
| 1956 | 4,207 | 5.27 |
| 1955 | 3,412 | 4.81 |
| 1954 | 2,775 | 4.41 |

exceeded 20% year-to-year gain except in 1957, when the gain over the previous year was only 18.5%. Even more important is the fact that the percentage held by First Charter has increased in each year and all indications are that it will continue to do so.

The freeze on the creation of new savings and loan holding companies having more than one association and the restriction on the external expansion of present holding companies have closed a well-known route of expansion or growth whereby a company that has stock outstanding in the hands of the public engages in a number of mergers or cash a quisitions. If the present free is enacted into permanent leg lation—and we believe it will this road of growth will closed. However, the cons quences to the stock will lessened by two factors. Fir current prices inside the indu try for individual associatio are at around the same lev as the market valuation for Fi Charter. Second, if no holdi companies are permitted, th could be a scarcity value for t securities of the outstandi ones.

There have been proposals

First Charter Financial Corp.

| Year | Unpaid Principal Balances of Loans (Millions) | Savings Accounts (Millions) | Gross Earnings (Millions) | Net Earnings Per Share |
|---|---|---|---|---|
| 1959 | $509.7 | $457.0 | $34.6 | $1.67 |
| 1958 | 388.4 | 355.8 | 26.3 | 1.37 |
| 1957 | 312.2 | 282.5 | 21.5 | 1.20 |
| 1956 | 233.2 | 221.9 | 15.3 | 0.80 |
| 1955 | 177.6 | 164.3 | 13.0 | 0.79 |
| 1954 | 128.4 | 122.6 | 8.7 | 0.42 |

FIRST CHARTER FINANCIAL CORPORATION

| | |
|---|---|
| Price | $22 |
| Dividend | 2½%* |
| Yield | 0 |
| Where Traded | O.T.C. |

*In stock in 1959

| Capitalization | |
|---|---|
| Long Term Debt | $9,483,490 |
| Common Stock | 6,150,000 shs. |

re Congress to change the tax ws concerning the industry. hile this is expected in this ar and next, it is believed that mpromise tax legislation will padded in 1962-1963. All our lculations in this study reflect e possibility of an increased x rate.

One of the basic factors in con- dering the value of a financial stitution, or any institution, is e measurement of its growth relation to other like compa- es and the industry in which is engaged. The table below flects the record of First Char- r, a record which compared vorably in the industry, or in y industry.

We expect the savings and an business to continue its past ce. Based on a continued pop- ation influx, high demands for w homes, healthy real estate les, continued high income, a neral healthy economy, we be- ve the savings and loan insti- tions will continue to outper- m other sectors of the indus- . First Charter should con- ue to share in this growth. ith interest rates at the present time the highest in a generation, and heavy mortgage and loan demand, 1960 earnings of First Charter should reach new record levels of approximately $2.10 a share.

The shares of First Charter at present levels are selling around 12½ times 1959 earnings and approximately 10 times estimated 1960 earnings. Based on a continued growth in all areas, including earnings, we can see significant capital appreciation possibilities even if present price-earnings multiples remain. Moreover, because of this great growth, we believe a re-evaluation of the price-earnings multiple is in order. Obviously, any upward revision of the multiple would accelerate the growth of the market valuation of the shares.

**Mesta Machine Company**

Mesta Machine Company is a major producer of steel and other mill machinery. The time required to produce this type of equipment is relatively long and, in addition, the placement of orders by customers, largely


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**EATON LABORATORIES, NORWICH, NEW YORK**

e steel industry, is quite cycli-l. As a result, order back-logs ccumulate in boom periods. Due the build-up of such orders nd the long production cycle, elivery may often times be two ears after the order has been laced.

Replacement parts and serv-es on the average, account for % of sales. Steel rolls, the bulk the replacement business, are rgely custom items designed r particular rolling mill equip-ent. While there are several roducers of rolls, Mesta is in very strong competitive posi-on due to the high quality of s product. The price of this re-lacement part is based upon the uality. Mesta guarantees a spe-ific performance tied to rolling stipulated amount of steel. The stomer receives a pro rata re-nd if the guaranteed quality is ot rolled. Due to its consider-ble know-how, Mesta offers nger guarantees and meets ese guarantees to a greater egree than competitors.

The replacement parts busi-ess provides an element of sta-lity to Mesta which is hard to nd throughout the various fa-ts of the steel industry. Al-hough the demand for rolls is rectly tied to the rate of steel nsumption, even in the poorest economic conditions there is demand for this basic part. ccordingly, Mesta has an im-portant sales item in even the worst business years. The profit-ability is great with pre-tax earn-ings probably more than 40% of sales, which is about three times that of original equipment.

In the post-war period, the steel industry has expanded fa-cilities greatly. Mesta has bene-fited directly through the deliv-eries of original equipment. In addition, the size of the replace-ment parts business has been in-creased with the larger annual output of steel.

Mesta achieved record earn-ings in 1958 when net income was equal to $6.81 per share (before a non-recurring pension expense of about 35¢), despite a decline in replacement part sales reflecting the reduced level of steel output in that recession year. The excellent performance was due to the high rate of orig-inal equipment deliveries.

Currently, Mesta is in a posi-tion to improve upon the record results of 1958. The backlog dur-ing 1959 rose to $71.5 million from $49 million at the start of the year. So far in 1960 the com-pany has received several sub-stantial original equipment or-ders. The backlog is of such mag-nitude that the deliveries extend into 1961, although substantial deliveries should commence dur-ing the second quarter of 1960. With profits on original equip-ment deliveries only accounted

MESTA MACHINE COMPANY

| | |
|---|---|
| Price ..... $60 | Capitalization (12/31/59) |
| Dividend ..... $3.50 | Long Term Debt ..... $6,315,789 |
| Yield ..... 5.0% | Common Stock ..... 987,979 shs. |
| Traded ..... N.Y.S.E. | |
| 1959-60 Price Range ... 82¼-53¾ | |

for at delivery, earnings will be nil until that time. The first quarter of 1960, however, should benefit from the high rate of steel production. With both replacement and original equipment sales to increase this year, Mesta is currently on the verge of achieving record earnings. At a minimum, net income should be $7.00 per share with $7.50 probable, although $8.00 can be achieved, up from $5.21 in 1959.

In the past, Mesta was unable to attain this high level since the company did not have sufficient facilities or the proper product mix. In 1956, a substantial plant was bought from the U.S. Government, but full utilization could not be effected by 1958. Now, the company has a capacity of about $90 million, which is well above the shipments of $80 million in 1958.

Over the longer term the outlook for Mesta is favorable. In recent months the company has again been obtaining orders from abroad, which indicates its equipment is competitive with Germany and Italy. In addition, the much greater demands by the economy for steel have bu a rising base for sales.

It would also appear that element of stability, in additi to the replacement parts bu ness, has been built into Me sales. The long production le time in original equipment h created sales in recession yea Thus, the earnings and sales the company have shown re tively little of the volatility ch acteristic of a capital goods co pany.

The financial condition of M ta is strong. At the end of 19 current assets totaled $31 m lion, more than four times t $7 million of current liabiliti In addition, a $6.3 million mo gage with interest at 3% is o standing.

Historically, Mesta has p out a relatively high portion earnings. During 1959, divide payments totaled $3.50 per sha providing a yield of 5.6%. W earnings rising this year, would expect an increase in dividend. The shares of Me must be considered of high qu ity due to the relative stabil of earnings and the long-d

PLASTIC APPLICATORS, INC.

| YEAR ENDING APRIL 31ST | NET SALES | NET EARNINGS |
|---|---|---|
| 1959 | $4,449,088 | $407,101 |
| 1958 | 2,984,496 | 132,745 |
| 1957 | 2,847,444 | 62,682 |
| 1956 | 1,775,814 | 173,560 |
| 1955 | 419,852 | 26,299 |
| 1954 | 229,173 | 6,364 |

end-paying record of the company. At the present price of 12 mes depressed 1959 results and times 1960 estimated results, e shares are undervalued.

**Plastic Applicators, Inc.**

Plastic Applicators, Inc. has rospered by helping the giant etroleum industry keep its osts down. The company applies nternally baked plastic coatings o oil field tubular goods, such as il wells, tubing casing, line pipe, c. The coating inhibits corroon and to a lesser extent the ccumulation of paraffin.

The acceptance by the oil inustry of Plastic Applicators' ervices is reflected in its record. This growth is even more imressive in view of the sharp deline in total oil well drilling ctivity since 1956. Plastic Aplicators is thus genuinely in a rowth area, not merely growg with a growing customer, ut growing by offering a new, eeded service.

So far in the company's 1960 fiscal year, earnings have been somewhat lower than expected with the first quarter netting only $107,000. November, with its strike induced steel shortages, accounted for most of the poor results and the months since have been much better. Second quarter should see $125,000 net. For all of 1960, $500,000 net is a reasonable goal on sales of $6 million. On the presently outstanding stock, 1960 net should be about $2.00 per share. On the basis of the number of shares which would be outstanding after full conversion of outstanding debentures and exercise of options but adding back interest costs, the 1960 earnings should be equal to about $1.55 a share.

Looking ahead, we see plastic coatings continuing to grow in use. Petroleum companies are becoming more and more cost conscious and are therefore more and more willing to spend a little more to prevent large future losses. By coating first, the need

PLASTIC APPLICATORS, INC.

| | | | |
|---|---|---|---|
| Price | $18 | Capitalization | |
| Dividend | 40¢ plus 5% stock | Cv. Sub. Sinking Fund Deb | $1,000,000* |
| Yield | 2.2% | Common Stock | 247,406 shs. |
| Traded | O.T.C. | | |

*Convertible at $16 to 10/1/61 and higher prices thereafter until 10/1/69.

for halting production and pulling pipe is decreased. As wells go deeper, the costs of pulling pipe become greater and the need for coatings increases. Also, as wells go deeper, more pipe is used.

The company is also busy building a new earning power. Most important of these new assets is pipe inspection. This service entails inspection of new and used pipe to detect flaws such as cracks, etc., that may result in subsequent failure of the pipe. Plastic has always inspected pipe upon request before coating at its mills. Now it is expanding rapidly into field inspection, using mobile units. Presently, the company is developing a new inspection device which it hopes will make it even more competitive. Again, deeper wells and cost consciousness on the part of the oil industry are increasing demand for this service.

To serve the growing secondary oil recovery market, Plastic has built a cement lining plant. Cement coating to fight corrosion is more economic than baked plastics and can be used he since the necessary water lin used in these projects are ge erally larger, allowing a thick coating.

The company's rubber moldi and lining division is develop new products, and though no will be immediately importa they could be a significant sou of earning power in the futu

In conclusion then, Plastic A plicators is a leader in a sm but rapidly growing industry is expanding into newer ar with high promise. It has de onstrated an ability to gr These factors make the pres price-earnings ratio low a therefore, appreciation in stock seems promising as ea ings grow and as the higher ea ings received a multiple more keeping with the company's cord.

One line of caution should added. Plastic is a small co pany and therefore incorpora all the financial and operat risks inherent in small un The risks, however, seem wo taking.◀

**Triurate Tablets** *(McNeil)*

ach tablet contains 100 mg. of xazolamine, 0.5 mg. of colchi- ne and 300 mg. of acetamino- hen. *Indications:* For chronic ut and gouty arthritis, espe- ally when aches, pains and neral discomfort accompany e disease. *Precautions:* Not commended for the treatment acute gout. *Dosage:* Average se is one tablet three times ily after meals. Patient should instructed to ingest two full asses of liquid with each meal d two full glasses of liquid tween meals. *Supplied:* In bot- s containing 50 or 500 tablets.

**Dianabol Tablets** *(Ciba)*

ch tablet contains 5 mg. of ethandrostenolone. *Indica- ns:* In debilitated states rang- g from underweight to cachex- for weight gain. Preoperative- and postoperatively, to pro- ote protein anabolism and und healing. Decubitus ulcers d during convalescent stage llowing burns and accidental uma, to minimize effects of otein loss and speed recovery. teoporosis, to relieve pain and courage calcium utilization. Acute and chronic infectious dis- ease, as supportive therapy. Geriatric states, to improve sense of well-being and appetite. *Con- traindications:* Prostatic carci- noma and severe liver damage. *Dosage:* Average adult dosage is one or two tablets daily. When a more rapid or intense effect is required, two to four tablets daily may be given for three weeks; dosage should then be re- duced to one or two tablets daily for maintenance. Inter- mittent therapy is recommend- ed whenever the drug must be administered over long periods of time. *Supplied:* In bottles containing 100 tablets.

►**Chymoral Tablets** *(Armour)*

Oral anti-inflammatory tablet. Each tablet provides enzymatic activity equivalent to 50,000 Ar- mour units (trypsin and chymo- trypsin activity in a ratio of ap- proximately six to one). *Indica- tions:* Conditions accompanied by inflammation, swelling and pain. *Dosage:* Initially, two tab- lets four times daily. For main- tenance, one tablet four times daily. *Supplied:* In bottles con- taining 48 tablets.

**►Darcil Tablets** *(Wyeth)*

Anti-infective. Each tablet contains 250 mg. (400,000 units) of phenethicillin potassium. *Indications:* For respiratory and urinary tract infections, skin, soft tissue and surgical infections and other bacterial infections due to penicillin-susceptible organisms. *Dosage:* Depending on the severity of infection, 125 or 250 mg. three times daily. Large doses of 500 mg. three times daily or 250 mg. every four hours may be used for more severe infections. *Supplied:* In vials containing 36 tablets.

**►MER/29** *(Merrell)*

Cholesterol biosynthesis inhibitor. Each capsule contains 250 mg. of triparanol. *Indications:* For patients with hypercholesterolemia and conditions thought to be associated with abnormal cholesterol metabolism. These include coronary artery disease (angina pectoris and post-myocardial infarction), generalized atherosclerosis, cerebral arteriosclerosis and any other condition thought to be related to hypercholesterolemia. *Caution:* The drug should not be administered during pregnancy. *Dosage:* One capsule once daily before breakfast. *Supplied:* In bottles containing 30 capsules.

**►Neo-Diloderm Aerosol** *(Schering*

Each 50 gm. spray container co tains 8.3 mg. of dichlorisone a 16.7 mg. of neomycin sulfate wi propellant. *Indications:* For i fected dermatoses. Atopic de matitis, infantile eczema, allerg and nummular eczema, ecz matoid dermatitis, disseminat neurodermatitis, pruritus a and pruritus with lichenificati and contact dermatitis due plants (rhus poisoning) and ot er substances. *Dosage:* For to cal application. Shake spray d penser. Hold upright and spr at a distance of three to s inches from the affected si three or four times daily. A second spray delivers 0.25 chlorisone and 0.5 mg. neomyc sulfate, an amount sufficient cover an area about the size the hand. Do not spray arou the eyes. *Supplied:* In 50 g containers.

**►Ser-Ap-Es Tablets** *(Cib*

Three antihypertensive dru combined into one tablet. Ea tablet contains 0.1 mg. of *Serp sil,* 25 mg. of *Apresoline* and mg. of *Esidrix. Indications:* F the treatment of high blood pre sure. *Dosage:* To be adjusted the requirements of the patie *Supplied:* In bottles containi 100 tablets.

**Rauwax-N** *(Squibb)*

Antihypertensive-diuretic. Each capsule-shaped tablet contains 2 mg. of Rauwolfia Serpentina whole root, 4 mg. of benzydroflumethiazide and 400 mg. of potassium chloride. *Indications:* All degrees of essential hypertension —mild, moderate and severe. In patients manifesting signs of congestive heart failure or edema and in patients requiring an immediate lowering of blood pressure. For the treatment of the anxious, hypertensive patient. *Dosage:* One to four tablets daily after meals. If the higher amounts are needed, total daily dosage should be divided into two doses given every 12 hours. For maintenance, one or two tablets daily is adequate for most patients. *Supplied:* In bottles containing 100 tablets.

**►Athrombin-K Tablets**
*(Purdue Frederick)*

Anticoagulant. Each tablet contains either 5, 10 *or* 25 mg. of warfarin potassium. *Indications:* For treatment and/or prophylaxis of intravascular clotting. *Contraindications:* Visceral ulceration, liver disease, renal disease, blood dyscrasias with hemorrhagic tendencies, subacute bacterial endocarditis, bleeding granulomatous disease, brain and spinal cord surgery, continuous tubal drainage of G.I. or G.U. tracts, obstetrical cases near term, threatened and incomplete abortion and before surgery of any kind. *Dosage:* Induction, 40 to 60 mg. given in three doses over a 12 hour period or, preferably, in a single dose (for older and debilitated patients use 20 to 40 mg.). Therapeutic range is usually attained in 12 to 24 hours. Maintenance, to be determined on an individual basis. *Supplied:* Each strength in bottles containing 25 or 100 tablets.

**►Diloderm Aerosol** *(Schering)*

Each 50 gm. spray container contains dichlorisone 8.3 mg. with propellant. *Indications:* For uncomplicated dermatoses. Atopic dermatitis, infantile eczema, allergic and nummular eczema, eczematoid dermatitis, disseminated neurodermatitis, pruritus ani and pruritus with lichenification and contact dermatitis due to plants (rhus poisoning) and other substances. *Dosage:* Shake spray dispenser. Hold upright and spray at a distance of three to six inches from the affected site three or four times daily. A 3-second spray delivers 0.25 mg. of dichlorisone, an amount sufficient to cover an area about the size of the hand. Do not spray around the eyes. *Supplied:* In 50 gm. spray containers.

**►Mydriacyl Solution** *(Alcon)*

Mydriatic-cycloplegic. Available in two strengths: Solution contains either 0.5 *or* 1.0% of bistropamide. *Indications:* The 0.5% concentration is recommended for mydriasis and the 1.0% is preferred for maximal cycloplegia. *Caution:* As with any mydriatic, caution should be exercised in its instillation in the eye, especially in those cases where the pressure is either not known, has been found to be high, or the anterior chamber is shallow. *Dosage:* For refraction, one to two drops are sufficient. Maximal mydriasis may be maintained for extended duration by instillation of drops every 30 minutes. *Supplied:* Either strength in 7.5 cc. Drop-Trainers or 15 cc. Drop-Trainers.

**►Gevrestin Capsules** *(Lederle)*

Geriatric vitamins-minerals-hormones-*d*-amphetamine preparation. *Indications:* To meet the requirements of the older patient for essential vitamins and minerals, to provide estrogen and androgen for efficient protein and bone metabolism, and to help neutralize depression with *d*-amphetamine. *Dosage:* One capsule daily, or as indicated as a nutritional supplement and a means of administering small doses of combined estrogen-an drogen therapy. In women, it i recommended that the treatmen be given in 21-day courses with rest period between each cours *Supplied:* In bottles containin 100 or 1000 capsules.

**►Cytran Tablets** *(Upjoh*

Tranquilizer - hormone - diure ic. Each tablet contains 2.5 mg. medroxyprogesterone acetat 35.0 mg. of ethoxzolamide an 300 mg. of ectylurea. *Indication* For relief of premenstrual te sion. *Dosage:* Varies in differe patients, or even in the same p tient from one cycle to the nex Usual range is one to two table daily beginning five to ten da before menses. *Supplied:* bottles containing 20 or 100 ta lets.

**►Cynal Tablets** *(Lloyd*

Each tablet contains 10 mg. vitamin $B_1$, 25 mcg. of vitami $B_{12}$, 5 mg. of vitamin $B_6$, togethe with vitamin $B_{12}$ absorption-en hancing complex. *Indication* To stimulate appetite, increas food intake and help insur healthy growth in the youn *Dosage:* One tablet daily. *Sup plied:* In bottles containing 5 tablets.

► **A Guide to Antibiotic Therapy**

*by Henry Welch, Ph.D., Medical Encyclopedia, Inc., New York. 1959. $3.00*

This ready reference of important information concerning each of 31 antibiotics, by one of the greatest authorities on the subject, will prove of great interest and usefulness to any practicing physician or surgeon.

► **The American Academy of Orthopedic Surgeons Instructional Course Lectures, Volume XVI, 1959**

*Fred C. Reynolds, M.D., St. Louis, Mo., Editor. Illustrated. The C. V. Mosby Company, St. Louis 3. $16.00*

The success of the first instructional course given in 1943 was so successful as to cause such a course to be given each year since that time. As in previous years, the subject matter of this volume of instructional course lectures has been gathered from the various instructors contributing to the program. It was not found possible to publish all of the papers which were made available.

The subject Parts are Symposium on Injuries to Air Fleets; The Hand; The Foot; The Knee; The Spine; Unequal Extremities, Osteomyelitis, Electromyography in Orthopedic Surgery (in one Part), and Fractures.

All these subjects are dealt with by orthopedists of the highest eminence.

► **Soil, Grass and Cancer**

*by Andre Voisin, Membre de l'Academie d'Agriculture de France, Charge d'Enseignement á l'Ecole Nationale Veterinaire d'Alfort (Paris). Translated from the French by Catherine T. M. Herriot and Dr. Henry Kennedy, Secretary, Irish Agricultural Organisation Society, Ltd. Philosophical Library, Inc., New York. 1959. $15.00*

This book of rather startling title has a foreword by Dr. Allan Fraser of the University of Aberdeen, and one by Dr. H. M. Sinclair of Oxford University. The former states that, in view of the fact that little is being accomplished in our warfare on cancer,

it may be well to look further into the prospect of accomplishing something worthwhile by following up the work reported by the author. The latter says that not everyone will agree with the author's conclusion but that he states the evidence for them "so that those interested in this important subject of soil and nutrition can read further and form their own conclusion."

### ► The Practical Evaluation of Surgical Heart Disease

*written and compiled by Robert G. Trout, M.D.; edited by Robert P. Glover, M.D.; medical illustrator Joseph Sunner; heart sounds recorded by J. Scott Butterworth, M.D. The Blakiston Division, McGraw-Hill Book Co., Inc., New York. Toronto. London. 1959. $10.00*

In no field of curative art have such important advances been made in the past few decades as in that of surgical heart disease. Those who believe in miracles have rung all the changes in discussion of this subject. Those who cannot agree that there is any such thing as a miracle unite in appreciation of these marvelous achievements. All of us should redouble our efforts to recognize at the earliest time possible heart disease amenable to surgical treatment, and arrange for care at the very be hands at the time when such car can reasonably promise mo good. Ways and means of ac complishing this objective ar amply set forth in this volum

### ► The Ciba Collection of Medical Illustrations, Vol. 3—A Compilation of Paintings on the Normal and Pathologic Anatomy o the Digestive System—Par I, Upper Digestive Tract

*Prepared by Frank H. Nette M.D.; edited by Ernst Oppe heimer, M.D. Commissioned a published by Ciba Pharmaceu cal Products, Inc., Summit, Ne Jersey. 1959. $12.50*

One need not subscribe to th statement "one picture is wor a thousand words" to realize th good pictures plus good text a a remarkably efficient way conveying information. No illu trations could possibly be bett than these, and the accompan ing text could hardly be im proved upon. Part I carries 1 full-color illustrations, with d scriptive text, fully cross-refe enced, covering anatomy and p thology of the upper digesti tract from mouth to duoden jejunal junction. No physician surgeon in practice will regr investing in and studying th book.

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### ► Clinical Auscultation of the Heart, Second Edition

*by Samuel A. Levine, M.D., F.A.C.P., Emeritus Clinical Professor of Medicine, Harvard Medical School, and W. Proctor Harvey, M.D., Associate Professor of Medicine, Georgetown University School of Medicine and Director. With 660 illustrations. W. B. Saunders Company, Philadelphia and London. 1959. $11.00*

In these days of almost slavish dependence on the electrocardiograph in the diagnosis of heart diseases, it is necessary to recall that clinical auscultation of the heart is still an indispensable means of diagnosis of diseases of this organ and of following their courses over months and years. There are none more competent for this task of recollection than the authors.

### ► Symposium on Glaucoma

*edited by William B. Clark, M.D., F.A.C.S., Professor of Clinical Ophthalmology, Tulane University School of Medicine, New Orleans, La.; Joe M. Carmichael, M.S.J., Associate editor. With 99 figures, including two in color. The C. V. Mosby Company, St. Louis. 1959. $13.50*

No doctor of medicine could spend too much time being impressed with the need for consta vigilance as regards this con tion since it is so prone to p from the curable stage to th causing inevitable blindness. T histology, pathology, anatom biochemistry, diagnosis, a treatment of this common, a too frequently neglected, con tion are covered in the ampl manner without wastage words. The subject is dealt wi completely for the physician ha ing an opportunity to make t diagnosis earliest, and for tho to whom he is to refer the p tient to keep him from becomi blind.

### ► Antithrombotic Therapy

*by Paul W. Boyles, M.D., I structor in Medicine, Universi of Miami School of Medicin Miami, Florida. Grune & Stra ton, New York and Londo 1959. $5.00*

Chapter heads are: The Mec anism of Blood Coagulatio Clotting Tests, Antithrombo Reactions, Clinical Use of An thrombotic Agents, Present St us of Anticoagulant Therap Long Term Anticoagulant The apy, Thrombolytic Therapy.

It is sufficient to say of th book that the manuscript w awarded honorable mention the first Modern Medical Mon graph Competition.